# The Divine Art

from Kovarik, B. (2011). Revolutions in communication: Media history from Gutenberg to the digital age. Continuum.

## 1

# The Divine Art

> My design is to give an historical account of the authors, discovery, improvement and progress of the Art of Printing; an art so highly beneficial to mankind, by preserving and transmitting to posterity the treasures of ancient and modern learning, that its origin has been esteemed divine.
>
> Samuel Palmer, 1733

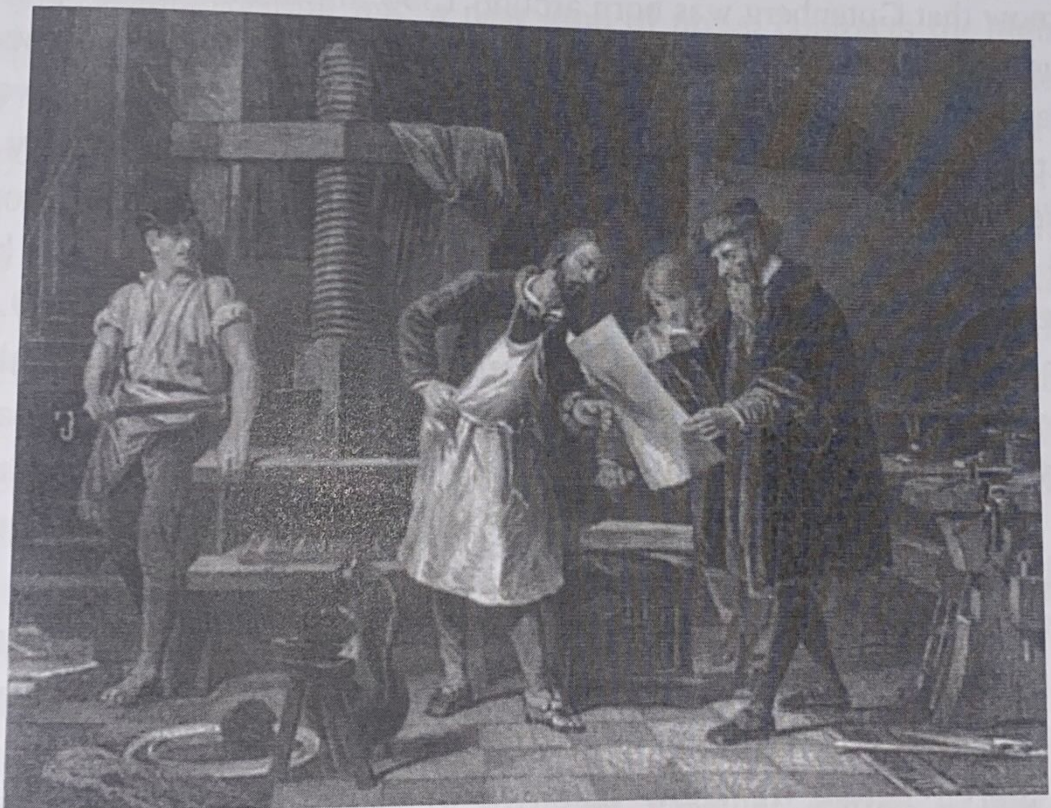

**Figure 1.1** Turning point—The invention of moveable type printing involved a combination of old and new techniques. Johannes Gutenberg, a metalsmith from Mainz, Germany, worked for over 15 years to perfect the process that produced the first Bible in 1454. It was an extraordinary example of craftsmanship, far superior to hand-lettered manuscripts, and it signaled not only the printing revolution, but a turning point in human history. Engraving by Johnson, Fry & Co., 1869, Library of Congress.

# 1 The Printing Revolution: 1400s to 1814

People were astonished when they saw the first unbound pages of Johannes Gutenberg's Bible at Frankfurt's traditional harvest fair in 1454. There were none of the blemishes, rubricator's marks, or scraped-out ink spots that characterized hand-lettered manuscript Bibles. The linen paper was bright, the edge of the type was crisp, and, at 30 florins, the cost was one-tenth of a manuscript Bible.

"The script was very neat and legible, not at all difficult to follow," wrote an enthusiastic bishop to his supervisor. "Your grace would be able to read it without effort, and indeed, without glasses." He also called Gutenberg a "marvelous man," which is one of the few personal insights we have into the life of Johannes Gensfleisch zur Laden zum Gutenberg (Eisenstein 1980; Fussel 2005).

We know that Gutenberg was born around 1398 in Mainz, Germany, at a time of plague, social chaos, and political upheaval. We think that his father was a cloth merchant and a goldsmith for the Church, and Johannes may well have learned that craft. We have a record of his enrollment at a university around 1418. We know of a will that mentions him in 1419, and there are records of a disputed promise of marriage in 1436. That's about all we know about his early life, except that he ran into problems with an intriguing business in 1439.

Gutenberg's business involved a new way to make the small metal badges that were popular with people who were on religious pilgrimages. The badges, or "pilgrims' mirrors," were four inches high and made from cheap metals such as lead and tin. They would be sewn onto hats or cloaks to show that the traveler was a pilgrim, and they would be held up in the presence of religious relics as the pilgrim's act of devotion. Millions of the badges were sold across Europe between the medieval era and the late Renaissance. Even today, the badges are still being dug up along the old pilgrim trails.

From court records, we know that two investors backed Gutenberg in an improved process for making the metal badges. They expected to sell 32,000 of them, and they were well into production when news came that the Aachen, Germany, pilgrimage was being postponed for a year due to bubonic plague.

With the setback, Gutenberg realized he needed another way to keep investors happy. He started a second enterprise in Strasbourg, France, that used the alloy of lead, tin, and antimony. It also used, according to cryptic court documents, "something required for printing" (McMurtrie 1941). Most likely, then, 1439 is the starting point for what became the first successful printing enterprise. This was the year when Gutenberg first poured metal into a matrix that held the blanks for the different letters of the alphabet. However, like the pilgrims' mirrors, this early enterprise also ended badly. By 1440, one partner was dead from the plague, and one of the important tools—a form for metal casting—could not be recovered from his house.

Gutenberg continued to experiment with metal type and presses during this time, and may have printed several undated works such as a Latin grammar and an astronomical calendar. After a few years, he returned to Mainz to assemble a printing system that would produce the flawless 1,282-page, 42-line Gutenberg Bible. This complex system included metal forges and molds for type; a way to set the type; a long-lasting ink; a new kind of press; contracts for high quality linen paper; methods to stack and order pages; and financing to pull the system together. Sales of the new Bibles were not slow, but in 1456, just as the printing company began to look like a financial success, Gutenberg's investor Johann Fust (or Faust) foreclosed on the loan and took over the business. Gutenberg probably continued in another small printing operation in Bamberg, Germany, and then worked for the Church in other ways in Mainz. He died in 1468.

Meanwhile, Fust and his son-in-law, and former Gutenberg foreman, Peter Schoffer, began the second wave of the printing revolution with a popular form of religious book called a psalter. They also printed two editions of works by the Roman poet Cicero and a "Letter to the Imperial Estates" describing the issues in a war between two contending bishops in Mainz in 1462. It was one of the first uses of the press to disseminate and comment on the news of the day.

For almost a decade, the printing industry grew slowly and stabilized in central Germany as several dozen people trained in the craft. Then in 1465, two German printers sponsored by a Catholic cardinal started a new printing operation near Rome. By 1469, three other German printing companies had moved to Venice, and by 1471, the number of printing businesses began a dramatic growth. By 1480, every city in Europe had at least one printing company.

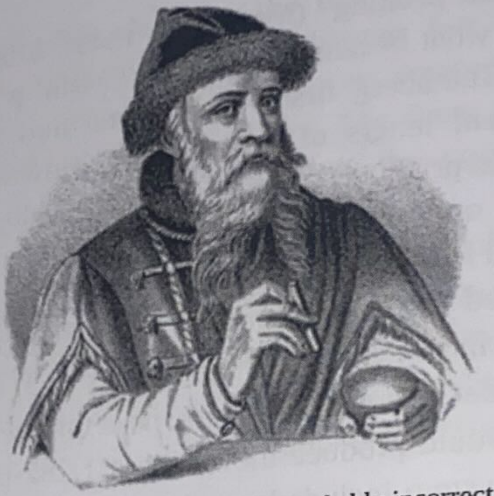

**Figure 1.2** Johannes Gutenberg—This is the traditional but probably incorrect likeness of the printer from Mainz. The hat and beard would not have been worn by someone from his time and culture. However, no better images exist, according to the Gutenberg Museum in Mainz, Germany. Engraving from John Luther Ringwalt, *American Encyclopedia of Printing*, Menamin & Ringwalt, 1871.

## Gutenberg and the Pilgrims' Badges

A pilgrim's badge was a small metal medallion worn by people on religious pilgrimages during the Medieval and Renaissance periods. Gutenberg's work on the problem of cheap, durable metals for an Aachen pilgrimage badge was a first step in the creation of effective moveable type. (Gutenberg Museum, Mainz, Germany.)

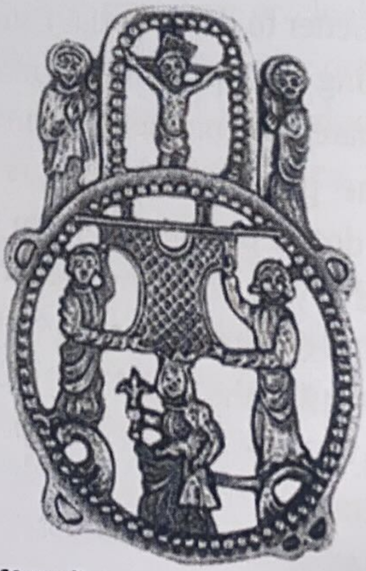

**Figure 1.3** Pilgrim's Badge—These small medallions were manufactured by the thousands around

the time moveable type was invented. Like moveable type, they were made of lead, tin and antimony. Each pilgrimage had its own medallion; this one was designed for the Aachen pilgrimage. Wikimedia Commons.

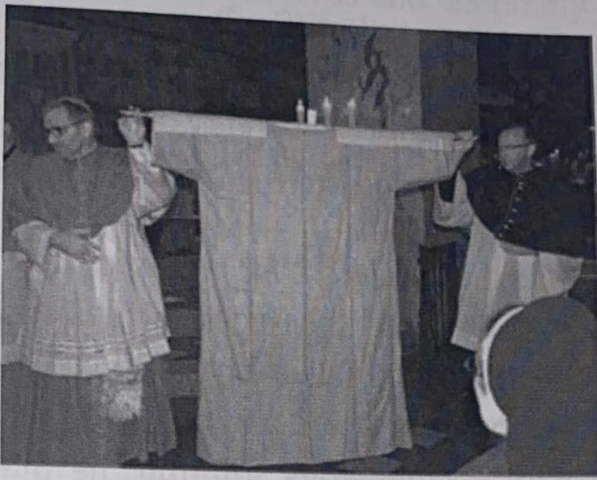

**Figure 1.4** Exaltation of Relics—Here we see the exaltation of relics at Aachen Cathedral in 2014—a ceremony unchanged in five centuries, and clearly the same ceremony as depicted in Figure 1.3, the Gutenberg-era pilgrim's badge. Photo courtesy of Domkapitel Aachen, © Andreeas Steindl.

## 1.1 Precursors of the printing revolution

Gutenberg's system of printing text with moveable type was new in 1454, but the process of making an impression with ink on a raised surface was ancient. The earliest known printed images are from "cylinder seals" used in early Mesopotamian civilizations from around 3500 BCE. Made from hard stone, glass, or ceramic materials, they were rolled across wet clay or textiles to create repeating patterns. Engraved seals and stamps continued to be used for thousands of years to print on clay and cloth.

Chinese artists and scribes used woodblock printing for images, and sometimes text, starting from the sixth century CE. In Europe, similar woodblock images were widely used for playing cards and pictures of saints from the 1200s on. Artists who wanted fine detail and longer press runs shifted to metal plates by the 1400s.

Still, the transition from engraving and woodcuts to printing with moveable type was not easy to make. Woodblock printing is not suitable for more than a few thousand impressions, since images and text start to get fuzzy as the edges of the wood break down under the pressure of the press. Engraving plates are one way around the problem, since text can be engraved on a copper or zinc plate, but they are expensive and difficult to correct. When thousands of impressions are needed for individual letters, something stronger and more flexible than wood is required. Chinese scholar Bi Sheng (906–1126 CE) was the first to come up with a solution to the moveable type problem. Between 1041 and 1048 during the Song dynasty, Bi Sheng cut characters onto the top of thin clay squares, and then baked them into hard ceramic tiles. The difficulty was in keeping the surface height of all of the separate tiles exactly even in order to ensure that the ink would be perfectly distributed. Even one millimeter can mean the difference between a good impression and one that is too light to read.

Bi Sheng came up with an ingenious solution: he placed all the tiles on a board with a thick coat of wax, and then heated up the board. When the wax was soft, he pressed the tiles down from the top with a metal plate, making them all even as they receded into the wax. Then he would let the wax cool.

The idea worked, but there was a larger problem: Chinese language is logographic, with many different symbols required. This is no obstacle for hand-painted text, but a moveable type system required at least 6,000 tiles. So the complexity of a logographic language made it difficult to sort, set, and use moveable type. On the other hand, the Western Latin and Cyrillic alphabets require only about 150 characters. So even though the hardware problem was solved in China, the larger software problem remained, and it was almost as easy to cut woodblocks as it was to set type with a 6,000-character system.

A similar moveable type system was developed in Korea in 1377 using brass characters and woodblock printing, but, Korean, like Chinese, is logographic. While the process worked, it was not a way to drastically cut the cost of communication (Schramm 1989).

A Dutch printer named Laurence Coster (1370–1440) came close to solving Europe's printing problem. The story is that he was playing blocks on the floor with his children when he had the idea to separate parts of the wooden block. The individual wooden characters could then be replaced when they started to wear down. Coster was apparently in the process of switching to metal characters when he died in 1440 (Sonn 2006).

These are just a few of the many rival claims to the legacy of moveable type printing, and the question is often asked whether Gutenberg is in fact the inventor of the technique. From the records and testimony that we have, it does seem clear that Gutenberg was first to solve the key problem of metal type and assemble all the necessary ingredients to create the printing revolution (Taylor 1907; De Vinne 1878; McGrath 2001).

Even so, the printing revolution did not occur because one lone genius invented a single new technology. Printing emerged because Gutenberg's insight into the key problem of moveable metal type occurred at a moment when all of the right conditions and technologies were in place. These included a surplus of paper and ink, as well as presses for printing, foundries for metalsmithing, and a system for business investments.

Most importantly, it occurred because of the rising need for education among the nobility and merchants of Renaissance Europe starting around the 1200s. The purchasing power of the new readership expanded the market to the point where scribes and illuminators were not keeping up with demand.

The printing revolution took place because of "a complex ensemble of many interrelated changes" in social conditions, said historian Elizabeth Eisenstein. "Gutenberg invented moveable type," said historian John Lienhard. "But, it's no exaggeration to say that Medieval Europe worked for 300 years to invent Gutenberg" (Lienhard 1992).

## 1.2 Diffusion of printing in Europe

Mainz, Germany, was the birthplace of printing; but Venice, Italy, was its cradle. As the most powerful and cultured city in Europe, Venice naturally attracted half of Europe's printing trade during the High Renaissance. By around 1500, Venice had over sixty-five publishing businesses with 200 presses and thousands of people working in printing, paper making, and type foundries.

Two German printers, John of Speyer and his brother Wendelin, were the first to bring printing to Venice in the late 1460s. They produced at least 800 copies of four books—three Roman classics and a book by St. Augustine—in a seven-month period between 1469 and 1470 (Brown 1891). The output of the new printing presses was remarkable for the time; one monk in a monastery might, in that same seven months, have produced only part of one book.

Nicholas Jenson (1420–1480), of Champagne, France, was another printing pioneer in Venice. Jenson's previous job as an engraver at a government coin minting plant in France made him uniquely qualified for the printing trade, since he could design and cut type faces on the metal punches used in type foundries. Jensen had been in Mainz to study under Gutenberg and his successors, and left for Venice in 1468. There he invented "roman" type, which was based on the capital lettering used in Roman architecture, along with a standard lower-case script style developed by monks between 800 and 1200 CE. Roman was more legible than Gutenberg's blackletter (gothic) style, and was quickly adopted as a standard.

Jensen, the Speyers, and other early Venetian printers catered to an elite readership, and they tended to see books as works of art in themselves. They printed the books in small editions on high quality parchment with elaborately illuminated initials at chapter heads and handsomely tooled leather bindings.

Aldus Manutius (1449–1515) changed the high-end business model in the 1490s when he began publishing books for the public at reasonable prices, rather than as works of art for the elite. Between 1494 and 1515, his company produced 157 different books, some with more than 1,000 copies. "While Jenson and his fellows looked upon the press largely as a means for putting out a handsome book [as] a beautiful work of art," said historian Horatio Brown, "Aldus regarded it quite as much as an instrument for the diffusion of scholarship" (Brown 1902).

By 1500, Venice had produced half of the four million first printed books, called "incunabula" (Latin for cradle). But other cities were catching up. By 1500, Paris had seventy-five printing houses and was beginning to surpass Venice, thanks in part to strong royal patronage. By 1533, another 18 million more books were produced by Europe's rapidly expanding publishing industry (Smiles 1867).

Today, only a single plaque on a wall near the Rialto bridge marks the city's once bustling printing center, noting, "From this place spread the new light of civil wisdom." But as Venice declined in power and freedom, the industry moved north to the great printing centers of Amsterdam, Brussels, Frankfurt, Paris, and London.

## 1.3 Why printing was revolutionary

The rapid diffusion of printing is explained by high demand for books in the Renaissance and their suddenly much lower cost. Printing made books hundreds to thousands of times cheaper to produce. Consider this comparison: a monk or nun could copy one double-sided page of one manuscript per day. But even in the earliest days of printing, a four-person crew of typesetters and printers could print about 1,500 double-sided pages per day.

One specific example comes from Leon Battista Alberti, a noted Renaissance priest, poet, and writer from Florence. Alberti may have understated the case in 1466 when he said that Gutenberg's process involved three men working 100 days to produce 200 Bibles. In contrast, he said, a bookseller in Florence employed forty-five scribes for twenty-two months to copy 200 manuscripts (Richardson 1999). The seventy-fold difference in this one case doesn't quite give an idea of the improvement, since Gutenberg's Bible was huge, and we don't know the size of the manuscripts in Florence.

Modern historian Elizabeth Eisenstein gives an example that brings us a little close to the awesome power of the new moveable type printing press: in Venice before the advent of printing, a monk might charge one florin for copying the eighty pages of Plato's *Dialogues*. In 1483, the Ripoli press charged three florins for printing 1,025 copies of the same number of pages. In any event, it's safe to say that printing was usually hundreds and sometimes thousands of times more cost-effective than hand-lettering (see Sidebar 1.2, Monk Power).

Like other media revolutions to come, the printing revolution regrouped people and skills. The older skills included papermaking, ink manufacturing, leather working, bookbinding and book marketing; and the new skills included press work, typesetting, and foundry type casting. Similar regroupings of skills would be seen, for example, in the visual revolution, when portrait painters like Samuel Morse became daguerreotype photographers and telegraphers; in the broadcasting revolution, when theatrical performers and broadcast engineers created radio drama; and in the digital revolution, when journalists and computer hackers created blogs and collaborative civic information systems.

During the transition from copying to printing in the mid- to late 1400s, the low prices of printed books probably alarmed book retailers who had been selling expensive manuscripts to an elite clientele. But then business accelerated, turning retailers into wholesalers, street vendors into bookstore owners, and copiers into publishers.

Printing continued to expand rapidly throughout the world, reaching as far west as Mexico in 1539 and as far east as Russia in 1553. But the impact of printing was only beginning to be felt (Ferreira 2006). “The printing press precipitated 200 years of chaos, moving from a world where the Catholic Church was the organizing political force to the Treaty of Westphalia, where we finally knew what the new unit was—the nation state,” said Clay Shirky, a sociologist who has described a close connection between communications revolutions and the collapse of institutions. The digital revolution, considered in Section IV of this book, would lead to similar chaos, he predicted (Shirkey 2010).

### Monk Power

One interesting way to think about changes in media technology is the amount of work that can be done in one day by one monk copying text by hand all day as compared to one person in a printing chapel or newspaper or broadcasting station. “Monk power” is a concept that helps make that comparison. (With thanks to Roland Lazenby.)

One monk = 1 hand-written page per day
One Gutenberg = 200 monk-days
One Walter (steam press) = 12 kilomonks (12,000 monk-days)
One Pulitzer (high-speed press) = 1 megamonk (1,000,000 monk-days)
One Vannevar (optical typesetting) = 6 megamonks
One Wozniak (desktop publishing) = 12 megamonks

### Compared to electronic and digital monk power

One Sarnoff (one radio or TV channel) = 1.15 megamonks
One Berners-Lee (1.3 million websites and posts per day) = 1.3 megamonks
One Brin (2.8 billion Google searches per day) = 2.8 gigamonks

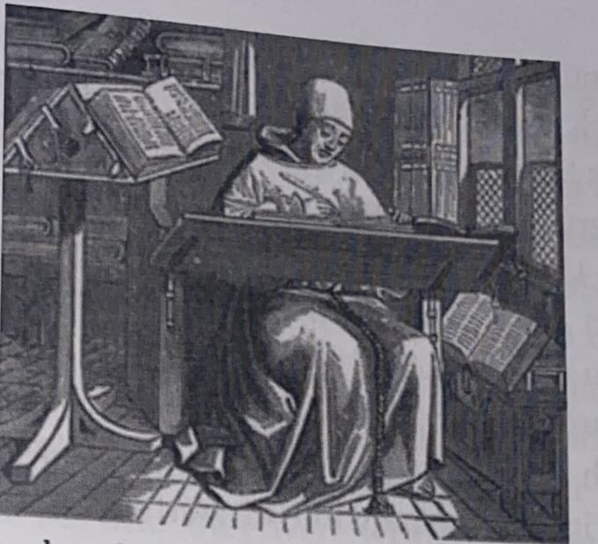

**Figure 1.5** Monk—A medieval monk works at a scriptorium. Illustration by William Blades, *Pentateuch of Printing*, 1891.

# 2 Printing and the Renaissance

The Renaissance was already well under way before the printing revolution. The new desire for knowledge, literacy, art, and wealth; the new institutions such as banks, academies, and universities; the new spirit of exploration; and the new focus on human rather than religious goals—all of these marked the changes that illuminated the human landscape at the dawn of early modern Europe. These conditions opened the way for moveable type printing. If Gutenberg had not invented it, someone else certainly would have.

What impact did printing, in turn, have on the Renaissance? Some scholars have pointed to the "lag" between the start of the Renaissance and the development of the printing industry as an indication that social construction was more significant than technological determinism in the printing revolution. Others, particularly Marshall McLuhan, have taken a more deterministic view. Both perspectives help us understand the intertwined nature of causes and effects as we study complex historical processes. To a greater or lesser degree, printing was a major element in the Renaissance.

The first goal for early printers was to increase the availability of religious texts, especially the Latin Bible. A second and closely related initial goal was to recover ancient Roman and Greek manuscripts. There was, said Samuel Palmer in his history of printing, "a laudable zeal in searching the libraries for those valuable books, which had lain buried in obscurity, and were become extremely scarce, great numbers being lost in the times of ignorance" (Palmer 1732).

Once the recovery of ancient manuscripts was underway during the "incunabula" before 1500, contemporary needs could be placed higher on the printers' agenda, and more books could be published in vernacular (native) languages, rather than only in Latin. This especially included the Bible, but also contemporary literature and scientific books. The publishing agenda of French, Dutch, and English printers increasingly emphasized nationalistic and humanistic goals during the expansion of northern printing in the 1500s and 1600s.

## 2.1 Initial effects of printing

One of the first effects of printing was seen, at the time, as unifying national languages. Books published in French, German, English, and other languages had the effect of codifying and standardizing far-flung dialects. This, in turn, would become a cornerstone of national identity.

A good example is the first book printed in England—Geoffrey Chaucer's *Canterbury Tales*. The first English printer, William Caxton (c. 1415–92), had moved his printing press from Brussels to a site near Westminster Abbey in 1476. Unlike printers in Venice, Caxton was not as interested in recovering ancient Greek and Roman texts as he was in bringing English authors to an English language market. English at this time, like most languages, had extraordinary variations between regional dialects. Caxton illustrated this with a story about a group of English merchants aboard a ship who sent a boat to a Thames River village to buy some eggs. They asked for "eggys," but the merchant said she did not speak French. Another one of the company understood the local dialect and asked for some "eyren," as eggs were then known in eastern England. "What sholde a man in thyse dayes now wryte," Caxton asked. "egges or eyren? Certaynly it is harde to playse euery man by cause [because] of dyuersite [diversity] and chaunge of langage" (British Library 2015). Later books, especially the Great Bible of 1539 and the King James Bible of 1611, also standardized the language and had a culturally unifying effect.

Standardization of information was another effect of printing; since it allowed exact reproduction of information in a way that manuscript copying did not. This is evident in the contrast between the travel logs of Marco Polo and those of Christopher Columbus. After his return from China in 1295, a century and a half before printing, Polo's narrative was copied in about 150 different manuscripts, with so many differences that we're not sure which version is authentic. In contrast, there is only one version of Christopher Columbus's letters about the exploration of the Caribbean in the 1490s, since they were fixed in printed form and widely distributed at the time they were written. So the certainty of accuracy was another way that printing was an improvement over the old oral–manuscript culture.

Printing itself became standardized in the early 1500s, making possible a new kind of non-linear access to information through title pages and tables of contents and page-numbering systems. Other improvements included better type fonts such as roman and italic, and a standardized printing production process codified in books like Joseph Moxon's *Handy Works* (1683) or Pierre Fournier's *Manuel Typographique* (1764).

Major social impacts of printing included the spread of humanism and individualism. New ideas and explorations about human topics included conservative theologian Sebastian Brant's *Ship of Fools* (1494), a satire about human behavior, illustrated by engraver Albrech Drurer; and *In Praise of Folly* by Desiderius Erasmus, published 1511. Both were veiled attacks on the social and religious structure in Europe. These and other books began to undermine the hold of religion on culture in the years just before the Protestant Reformation. Printing also boosted the Renaissance sense of individualism and achievement by elevating individuals through biography and authorship. For instance, Erasmus was probably the first modern writer to become famous in his lifetime, thanks to printing. And the ranks of Italian Renaissance artists would hardly be known without the 250 biographies in Giorgio Vasari's encyclopedic *Lives of the Most Eminent Painters, Sculptors & Architects*, first published in 1550.

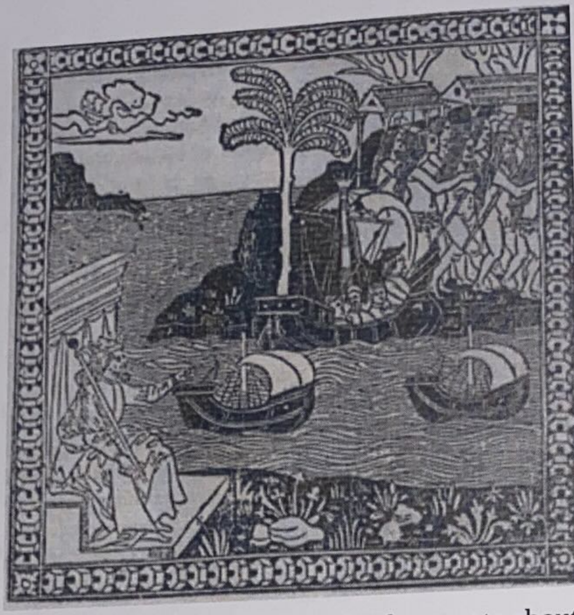

**Figure 1.6:** Letter from Columbus—When Christopher Columbus wrote about his explorations, the information spread rapidly across Europe thanks to printing. This woodcut accompanied a translation of the letter that was printed in Florence, Italy, in October of 1493. Library of Congress.

With standardization and individualism came the possibility of personal comparisons: old ideas could be contrasted, contradictions could be revealed, and new ideas could be presented. Perhaps the notion that a culture could change and reach for new horizons remains the deepest impact of the printing revolution.

## 3 Printing and the Protestant Reformation

It is hardly surprising that the Bible was the first book Gutenberg printed. Scripture was at the center of the medieval world, and during mass, priests and bishops would read manuscripts of the Latin Gospels aloud, and then use the sermon to interpret the readings in a liturgical fusion of oral and manuscript culture.

The Church initially welcomed printing as a divine gift. Gutenberg's Latin Bible was seen as a way to diffuse knowledge of scripture, and printing was also seen as a practical aid to the Church. For example, printed posters were helpful in recruiting soldiers to fight against invading Turks in the 1450s, and printing accelerated the Church's ability to trade cash for the forgiveness of sins—a practice known as selling indulgences. Where once the practice was limited to what could be written by hand, the printing press allowed thousands of indulgences to be issued whenever a church ran short of cash.

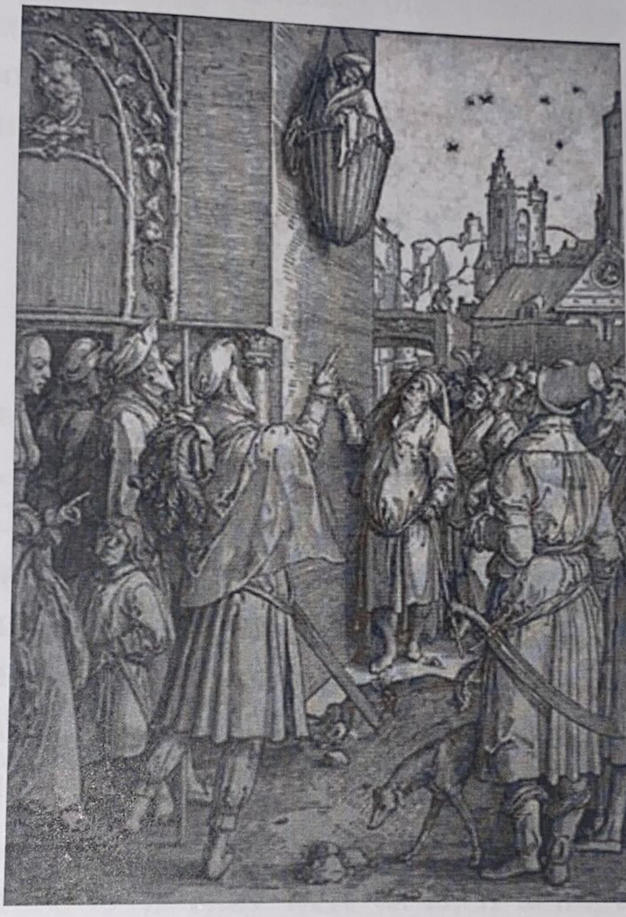

**Figure 1.7** Left him hanging—This 1525 woodcut by Lucas van Leyden (c. 1494–1533) depicts a legend about the Roman poet Virgil. The poet fell in love with the emperor's daughter who pretended to reciprocate. She promised to spend the night with him, and in order to evade her guards, she lowered a basket so he could reach her bedroom. But halfway up, she left him dangling, to be mocked the next morning by the citizens of Rome. The engraving tells us that even wise men can be foolish, and more generally, illustrates the new interest in secular and humanistic thinking ushered in by the printing revolution. Rijksmuseum, Amsterdam.

"There is considerable irony about the enthusiastic reception [first] accorded printing by the church," said historian Elizabeth Eisenstein. "Heralded on all sides as a 'peaceful art,' Gutenberg's invention probably contributed more to destroying Christian accord and inflaming religious warfare than any of the so-called arts of war ever did" (Eisenstein 1980).

This "destruction of Christian accord" began to occur when the Church reacted with alarm to translations of the Bible into vernacular (national) languages such as German, French, and English. Although many of these translations had already occurred before printing, they were not accessible to most people. John Wycliffe translated the Bible into English in the 1390s; Jan Huss helped translate the Bible into Czech in the early 1400s; and a variety of German translations, some created by the Church for missionary purposes, were in existence before printing. But none of these challenged the Church monopoly on knowledge since they were in manuscript form, with only a few copies in existence. Printing changed everything.

## 3.1 Martin Luther and printing

On the morning of October 31, 1517, a devoted priest and doctor of Bible studies, Martin Luther, wrote a letter to the Bishop of Mainz, and, the story goes, nailed a copy to the doors of a cathedral in Wittenberg, Germany. There was nothing terribly dramatic about the act itself—everybody posted notices by nailing them to doors—but Luther's 95 Theses shocked Europe and kicked off the Protestant Reformation.

Luther's point was that sales of indulgences were gross violations of the original idea of confession and penance. "The people are deceived by that indiscriminate and high-sounding promise of release," he wrote in one of the Theses. You couldn't just sin and pay, he said. You had to truly repent.

If his call for reform simply been shouted from the pulpits, or copied by hand, it could have been easily ignored or suppressed. Similar calls for reform from John Wycliffe of London and Jan Hus of Prague had been put down a century beforehand. But the new printing press amplified Luther's voice to an extent that astonished everyone—including Luther.

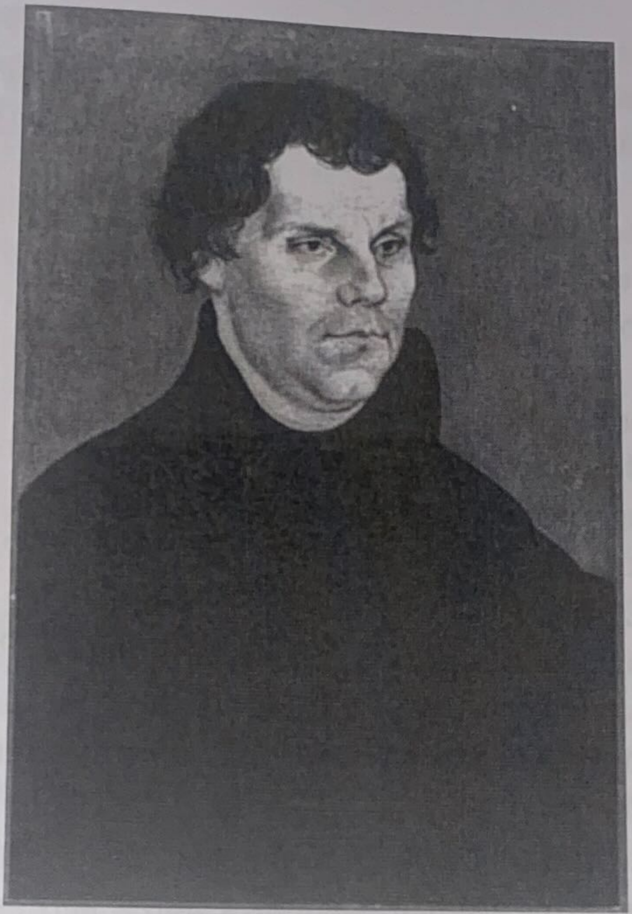

**Figure 1.8** Printing sparks Reformation—Martin Luther's calls for Church reforms were not the first in Europe, but they were amplified by the new power of the printing press. Luther was depicted around 1525 in this portrait by Lucas Cranach. Library of Congress.

The 95 Theses were printed by his friends in January 1519 and widely distributed (Brecht 1985–93). They were in such demand that crowds surged around printing shops, grabbing for pages still wet from the press (Smiles 1867). The controversy spread quickly. Within a few weeks, everyone in Europe knew about Luther's sharp criticism of the Church. For the first time in history, the power of a revolutionary idea was fully amplified by a mass medium.

In considering Luther's success, it's important to note that technology wasn't the only factor. British Museum director Neil MacGregor points out that, at the time, Germany was divided into regional powers rather than a national government. "You couldn't really have a Reformation in England or in France, because the central power was strong enough to kill it, or at least, make it much harder," MacGregor said. "It happens easily in Germany because of the political diversity" (Attar 2014). While the Catholics from southern German states hunted for Luther, powerful rulers in the northern German states kept him in hiding. He used the time to translate the Bible into German and see it printed—an act that codified and regularized the German language and help provide a stronger foundation for the culture. Luther described printing as "God's highest and extremest act of grace," and his followers began to see the printing press as an agent of freedom, delivering them from bondage to the Roman Church and delivering the light of true religion to Germany.

A decade after the Lutheran revolt started, the Reformation was well underway across Europe, and Protestant leaders took full advantage of the press. In Switzerland and France, John Calvin "played a significant role in the evolution of languages considered appropriate for theological writings," said historian Jean-Francois Gilmont (2005). In the process, Switzerland became something of the European capital of Protestantism, and Calvin's Reformed Church was the source of English Puritanism, Scottish Presbyterianism, and French Huguenot Protestantism.

In England, political power see-sawed between Protestants and Catholics in the early to mid-1500s, and each side used the press. Early in his reign, Henry VIII first suppressed Lutherans and the vernacular Bible translations, but then in 1533, broke away from the Roman Catholic Church and established a separate Church of England. He ordered the printing of an English language Bible, known as the "Great Bible" of 1539. It was based primarily on a translation by William Tyndale that had earlier been suppressed. Tyndale didn't live to see what was essentially his translation in print; he was captured by Catholics in Brussels and executed in 1536. Before he died, he said that he hoped he had opened King Henry's eyes.

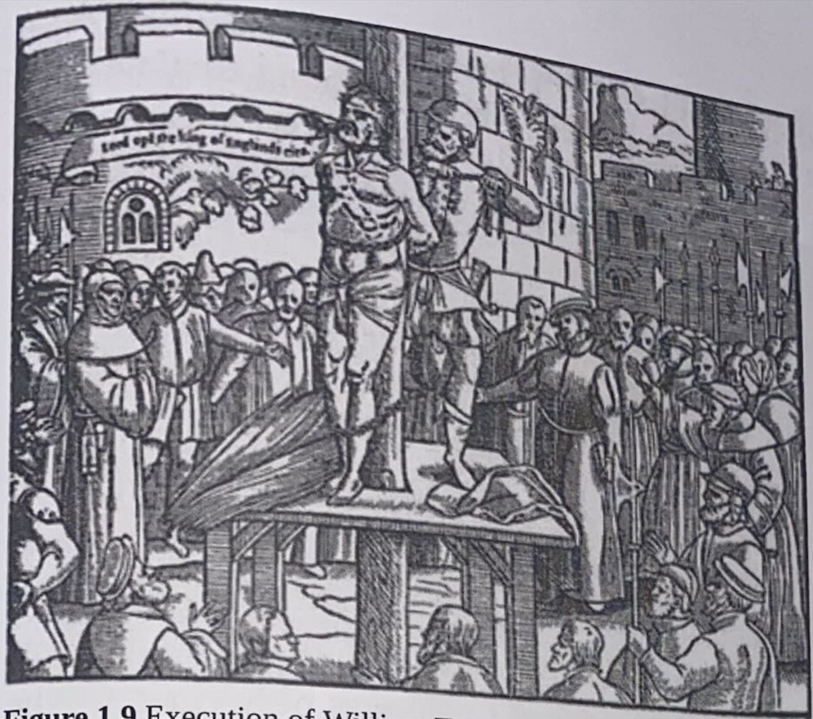
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**Figure 1.9** Execution of William Tyndale—British scholar William Tyndale was executed for heresy in 1536 after printing his unauthorized translation of the Bible from Hebrew and Greek into English. Subsequent English editions of the Bible, including Henry VIII's 1539 Great Bible and the King James Bible of 1611, are primarily based on Tyndale's translations. From Foxe's *Book of Martyrs*, 1563. Library of Congress.

The English throne returned to a Catholic monarch in 1553 when Henry VIII's daughter "Bloody" Mary took the throne and ordered hundreds of executions. Around that time, British Catholic cardinal Reginald Pole expressed the spirit of the Counter-Reformation when he warned Londoners against reading scripture for themselves: "You should not be your owne masters," he said. "Household religion [is] a seed bed of sedition."

When Catholic Queen Mary died in 1558, her half-sister Protestant Queen Elizabeth I took the throne with a promise of religious tolerance. Protestants solidified power with the publication of John Foxe's *Book of Martyrs* a few years later. A shocking piece of Protestant propaganda, Foxe's book depicted the gruesome executions of William Tyndale and many others, bolstering Protestant claims to legitimacy.

## 3.2 The Counter-Reformation

The gravity of the spreading chaos eventually became clear to Roman Catholic

Church officials who fought back with a ruthless Counter-Reformation. As a result, religious warfare broke out across Europe and the fighting continued for generations. In Germany, 25 to 40 percent of the population, already half-decimated by the plague, would perish in religious warfare between 1524 and 1648.

Ordinary people fared badly during the Counter-Reformation. Historian Carlo Ginzburg described the trial of one outspoken Italian miller named Menocchio who in 1584 was accused of heresy for openly expressing simple doubts about a few of the fine points of religious dogma. After an extensive public trial, Menocchio was executed (Ginzburg 1992). Millions of such cases emerged on both sides of the widening chasm between the Catholic and Protestant churches. Sometimes people were executed just for owning the wrong version of the Bible. Giordano Bruno, a philosopher who said the earth revoked around the sun, was burned at the stake in 1600. A more famous scientist who was persecuted for the same thing during this era was Galileo Galilei (1564–1642), an Italian mathematician whose astronomical observations convinced him of the truth of the heliocentric theory. Between 1612 and 1632 he skirted dangerous confrontation with Church authorities, but was finally forced to recant his views publicly under threat of torture.

Meanwhile, Protestant reformers in Switzerland, Germany, and England dogmatically referred to “sola scriptura” as the only authority and then often insisted that they were the only ones who could interpret that scripture. All too often “the rich and varied communal religious experiences of the Middle Ages” were lost as the new authorities demanded obedience. “Open books, in some instances, led to closed minds,” Eisenstein observed. The dissidents even suppressed other dissidents. The Church of England attempted to suppress Puritan and Scottish Presbyterian dissent well into the mid-1600s, sparking the “Bishops War” in Scotland and encouraging Puritan emigration to the new colonies in North America. In the end, political pragmatism and a sense of exhaustion helped to deflate religious zealotry in Europe. By the early 1600s, French Catholic Cardinal Richelieu formed pragmatic political alliances with Protestants in order to fight enemies who were Catholic. Religious warfare simmered down after the Treaty of Westphalia in 1648, where the major powers of Europe agreed that each king would determine the religion of his own nation.

But then more religious warfare emerged in France in 1685, forcing French Huguenots (Protestants) to flee the country.

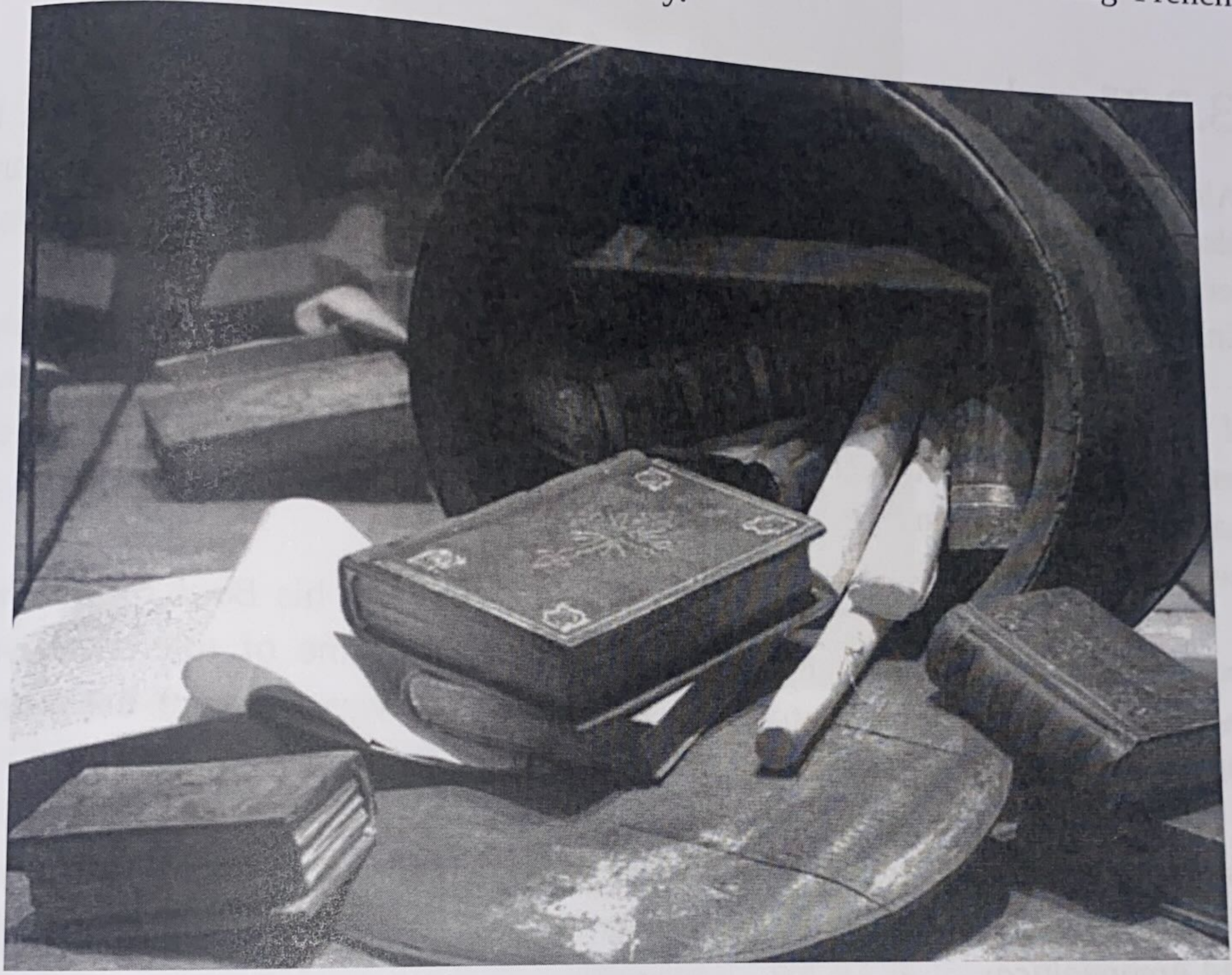

**Figure 1.10** Bibles in a barrel—This Ljubljana Castle exhibit shows Slovenian Bibles hidden in barrels. They were smuggled from a printing press in Wittenberg, Germany, in 1584 to Ljubljana to avoid Church authorities who violently opposed the printing of non-Latin Bibles. Primoz Trubar, the Bible's translator, is a national hero in Slovenia, as is Martin Luther in Germany and William Tyndale in Britain. Photo by Lin Burton.

Religion continued to be an important element in conflicts that continued to plague Europe in the late twentieth century, for example, in Ireland and the Balkans. As Elizabeth Eisenstein said:

> We still seem to be experiencing the contradictory effects of a process which fanned the flames of religious zeal and bigotry while fostering a new concern for ecumenical concord and toleration, which fixed linguistic and national divisions more permanently while creating a cosmopolitan Commonwealth of Learning and extending communications networks which have encompassed

the entire world. (Eisenstein 1980)

## 3.3 The slow emergence of religious tolerance

Although printing helped plunge Europe into centuries of religious warfare, it also amplified calls for tolerance and reason. As the horror of religious warfare receded, the need for religious tolerance became a primary ideal among Enlightenment writers.

In France, Sebastian Castellio (1515–63) became one of the first proponents of freedom of conscience. "It is unchristian to use arms against those who have been expelled from the Church, and to deny them rights common to all mankind," he wrote in "Whether heretics should be persecuted," a response to the intolerance of Protestant reformer John Calvin.

In England, John Foxe strengthened Protestantism with his *Book of Martyrs*, noted above, but he also "enunciated a sweeping doctrine of tolerance even towards Catholics, whose doctrines he detested with every fibre of his being" (Dickens 1978).

A British poet famed for writing *Paradise Lost*, John Milton (1608–74) matched the idea of religious tolerance to the historical touchstone of the Athenian senate and marketplace, arguing for a "marketplace of ideas" in his 1644 *Areopagitica*:

> And though all the winds of doctrine were let loose to play on the earth, so Truth be in the field, we do injuriously by licensing and prohibiting misdoubt her strength. Let her and Falsehood grapple; who ever knew Truth put to the worse in a free and open encounter?

Milton insisted that Truth would win out in a free and fair fight, although his argument for freedom of conscience was limited: it did not include "popery" (Catholicism), blasphemy, or impiety.

The North American Protestant colonies of Virginia, Massachusetts, and New York avoided religious war, but were notoriously intolerant of religious deviance in the early years. Yet at the surprisingly early date of 1649, the Catholic colony of Maryland made religious toleration the official position.

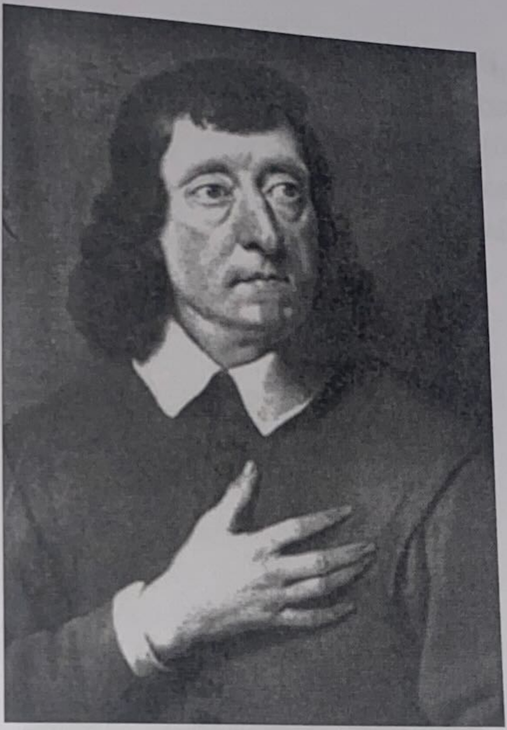

**Figure 1.11** John Milton—English poet and scholar John Milton argued for tolerance and free speech, insisting that truth would win in the marketplace of ideas. Painting by Pieter Van der Plaas, Library of Congress.

Although Maryland's official tolerance only applied to Christians, and was something of a pragmatic approach for a minority religion in a mostly Protestant set of English colonies, the act is still considered a leap forward for human rights:

> Whereas the inforceing of the conscience in matters of Religion hath frequently fallen out to be of dangerous Consequence in those commonwealthes where it hath been practised … Be it Therefore … enacted … That noe person or persons whatsoever within this Province … shall from henceforth bee any waies troubled, Molested or discountenanced for, or in respect of, his or her religion nor in the free exercise thereof … nor any way compelled to the beliefe or exercise of any other Religion against his or her consent …

Tolerance was a large part of the new creed of printing, and it was within this cultural ferment that the Renaissance gave way to the Enlightenment. "From the days of Castellio to those of Voltaire, the printing industry was the principal natural ally of libertarian, heterodox and ecumenical philosophers," Eisenstein said (Eisenstein 1980). Printers naturally wanted to expand markets, but the capitalistic motive was not the central point. All Europe was on the move, and "the enterprising publisher was the natural enemy of narrow minds."

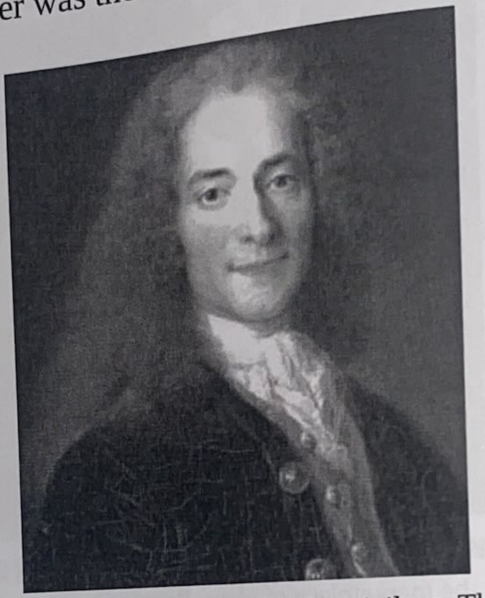

**Figure 1.12** Think for yourselves—… And let others enjoy the privilege. That was the advice of François-Marie Arouet (1694–1778), known as Voltaire, one of the most colorful and insightful of the French Enlightenment philosophers. Portrait by Nicolas de Largillière, c. 1725, Wikimedia Commons.

In France, for example, Francois Voltaire (1694–1788) railed against "the dreadful folly of religious wars." And Voltaire's friend, Benjamin Franklin, noted that printers themselves could be instruments of tolerance:

> Printers are educated in the Belief, that when Men differ in Opinion, both Sides ought equally to have the Advantage of being heard by the Publick; and that when Truth and Error have fair Play, the former is always an overmatch for the latter: Hence they chearfully serve all contending Writers that pay them well, without regarding on which side they are of the Question in Dispute. (Franklin 1731)

In his *Notes on the State of Virginia* (1787), Thomas Jefferson summed up the Enlightenment view of religious warfare: "Millions of innocent men, women and children … have been burnt, tortured, fined, imprisoned; yet we have not advanced one inch towards uniformity. What has been the effect of [religious] coercion? To make half the world fools, and the other half hypocrites."

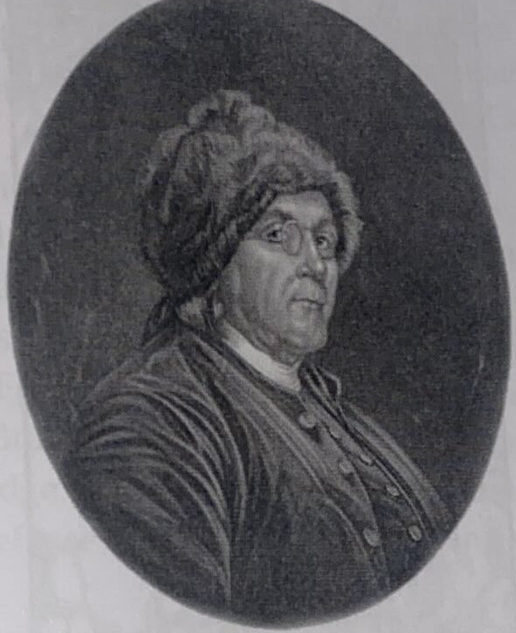

**Figure 1.13** Printer and scientist—Benjamin Franklin said that printers had a duty to ensure that all sides be heard in the marketplace of ideas. Painting by Charles Nicholas Cochin, c. 1777, Library of Congress.

## 4 Scientific and Technical Impacts of the Printing Revolution

Printing was the most obvious and probably the most important element in capturing the scientific and technological revolution from the Renaissance forward. Printing spread news of exploration, descriptions of new technologies, improvements in medicine, insights into astronomy, and information about a host of other discoveries. "The world before printing was one in which the whole pattern of learning, communicating and storing information was defined by what could be written down or drawn or spoken in a singular and immediate fashion," wrote historian Robert Friedel. After printing, it was the exact and repeatable message that "carried authority and influence" (Friedel 2007).

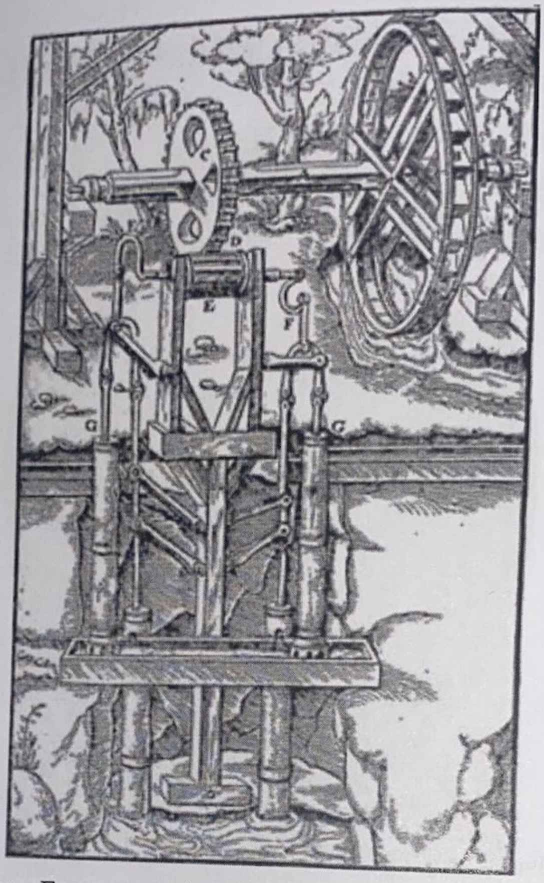

**Figure 1.14** Science and printing—Enormous scientific and engineering advances were possible with printing, since detailed information could be transmitted accurately. In this 1556 engraving, Georges Agricola describes a system to pump water out of a mine. Agricola's book *De Re Metallica* (of the nature of metals) remained the authoritative source of information on mining for the next 180 years. Library of Congress.

Printing spurred the exploration of physical and mental horizons with the publication of exact maps, charts, and astronomical tables. For instance, news of Columbus's explorations spread rapidly with printing in the 1490s, making him one of the first international heroes, at least until the genocide in the West Indies was understood (Zinn 1980). In contrast, the folkloric accounts of tenth-century Viking landings in North America were little known outside the oral/manuscript culture of Scandinavian nations.

The power of the press also influenced the way geographic discoveries were understood. The travel journals of Amerigo Vespucci were read by mapmaker Martin Waldseemüller, who believed Vespucci's idea that the land to the west could not be India, as Columbus claimed. In 1507, a new world map called the new continent "America" in his honor. The name, amplified by the new power of the printing press, continues to be used.

Early on, the press was not as much an agent of change in the scientific revolution as it had been in the Protestant Reformation. Again, the focus at first was on publishing books from classical Greek and Roman authorities. Scientific publication was also held back by religious intolerance, and the Church's suppression of astronomers Giordano Bruno, Nicholas Copernicus, and Galileo Gallilei is well known.

A new trend was evident in a 1556 book by Georgius Agricola (1494–1555), *De Re Mettalica*, an illustrated exploration of geology, mining, and metallurgy. The book set a standard for scientific and technical books that were to come.

Gradually, scientists adopted the printing press as part of their educational and research efforts. For example, in Denmark, the astronomical observatory established by Tycho Brahe (1546–1601) included a printing shop to help spread new scientific knowledge. While the Church continued suppressing many new ideas, its rear-guard defense of an old way of thinking was doomed by the new media revolution.

Sometimes reformers used the press to challenge the elites. One opponent of the British College of Physicians, an apothecary named Nicholas Culpeper, dared to translate the Pharmacoepia from Latin to English so that medical prescriptions could be widely available. "He hoped it would make every man his own physician, as the translation of the Bible made every man his own theologian" (Conner 2005).

As the horizon of knowledge expanded, the role of printing in forming communities became appreciated. Publishers of all kinds of books encouraged readers to help amend the next edition. For instance, mapmakers and medicinal herbalists called on readers to submit notes about plants and coastlines, and send seeds and maps to the publishers. They "called upon the unlearned to contribute to the knowledge of natural history, geography and physics by communicating their observations on birds and flowers, on ebb and flood tide, on celestial phenomena … Travelers and mariners especially were invited to do so" (Eisenstein 1980: 236). Eisenstein attributes the advent of participatory media to both idealistic and commercial motives, but there are parallels to crowd-sourcing in the digital age, such as the Wikipedia online encyclopedia with thousands of volunteer writers. "A new form of data collection was launched in which everyman could play a supporting role," she wrote.

# 5 News in Print

The need to hear and share news is universal in human cultures and a central part of what defines a community (Stephens 2007). Personal news is the first thing most people discuss when they haven't seen each other in a while. People also want to know the latest events in politics, religion, finance, and other areas, whether they are in an oral culture or a literate culture or some blend of the two.

In ancient Rome and China, bureaucrats wrote of political events in the capitals and sent the news out to the provinces. Commercial newsletters were produced as early as 131 BCE, and "armies of scribes" were employed to copy, publish and sell books by the thousands (Schramm 1988). A daily newsletter called the *Acta Diurna* conveyed not only official acts of the Senate but also news of crime, divorce, and other items of general interest (Ward 1996). Intended for both a wide general audience and the upper classes, the *Acta Diurna* is usually considered the first example of a mass media publication.

Aside from individual correspondence and oral communication, there are few known examples of mass communication in Europe between the fall of the Roman Empire in the 400 CE period to the early Renaissance. Around the 1380s, the emergence of banks and international trading made small group communication necessary, and regular handwritten newsletters were copied and sent by messenger.

Book publishing dominated the printing trade after Gutenberg's invention caught on, but a wide variety of small publications were also coming into print. Book merchants offered single-page woodblocks and engravings, along with pamphlets and booklets, such as religious tracts and sermons, exhortations to join causes, or speeches by monarchs and other public figures. Four basic kinds of news publications emerged between the late 1500s and early 1700s (Schramm 1988):

- Relation: a one-time publication about a single event, for example a battle or a coronation, usually printed on a small single sheet.
- Coronto: a small bound book about news from a foreign country.
- Diurnal: a regular publication that covered one subject, typically events in government.

- Mercury: a small bound book that would cover events from a single country for six months at a time.

Each of these types of publication can still be found in various forms. For example, a modern day "diurnal" might be the *Congressional Record* or *Federal Register*, published by the US government. Industry-oriented newsletters from groups like the Bureau of National Affairs might be considered modern day "mercury," in that they are issued daily or weekly but kept and bound by volume, and then used as reference books in specific industry and regulatory areas. Modern-day blogs focusing on a single subject are like "diurnals."

## 5.1 First newspapers

Johann Carolus, the owner of a French book printing company in Strasbourg, had grown tired of copying business newsletters by hand. In 1605, he decided to use the new printing press to save himself some time and began publishing the first newspaper.

"The copying has been slow and has necessarily taken much time, and since, moreover, I have recently purchased at a high and costly price [a] former printing workshop … I have set, printed and published the said advice in my printing workshop" (Weber 2006). Other newspapers quickly followed: *Aviso* in Wolfenbuttel, Germany (1609); then papers in Basel, Switzerland (1610); Frankfurt, Germany (1615); Berlin (1617); Amsterdam (1618); London (1621); and Paris (1631).

One early newspaper that was closer in form to the modern newspaper was the *Dutch Courante uyt Italien, Duytslandt,* &c., first published in 1618. Holland's printing industry introduced many other innovations around this time, including the first newspaper advertisements, the first woodcuts in a newspaper, and the first English and French-language newspapers that were printed in Amsterdam to evade the strict censorship in England and France.

The spread of newspapers and the relationships between printers of various nations is also illustrated by the career of Benjamin Harris, a publisher of small textbooks and Whig reformist tracts in London in the 1670s. From 1679 to 1681, Harris published *Domestick Intelligence, Or News from Both City and Country* in London. He moved to Boston in 1686 and stared the London Coffee House, modeled on the coffee houses that were becoming popular in England. He also began publishing small almanacs and textbooks and the first newspaper in the United States, *Publick Occurrences, Both Foreign and Domestick*, in 1690. The newspaper reported on a smallpox epidemic, on atrocities by Indians allied with the British, and some local news items. It had no license and was closed after the first edition. Harris took on some Massachusetts government printing work but decided to return London in 1695, where he founded the *London Post.*

Despite the difficulty of publishing news using woodblock printing, a prototype of newspapers, called *kawaraban*, emerged in Japan in the seventeenth century with news about natural disasters, social events, love suicides, and other topical issues. As elsewhere, a growing literacy rate supported the new media (Dentsu 2014).

## 5.2 Censorship and freedom of the press

The word "censor" comes from the ancient Roman office of Censor, established around 443 BCE, which was responsible for public morals as well as keeping track of the population through a census. In Rome, as in most other countries at most times, censorship of speech and writing was common. Freedom of speech had its early defenders such as Socrates, but his ideas were said to be corrupting the youth of Athens, and he was executed by poison in 339 BCE. Punishment for others who strayed too far from the official view is all too common in history, although freedom of speech and religion have occasionally been prized in some cultures. One notably civilized ruler was Ashoka Maurya of India, 269–232 BCE, who issued the Seven Pillar Edicts promoting religious tolerance and Buddhist principles of compassion and justice.

Free speech was hardly common in early Europe. The Magna Carta of England, for example, written in 1215, guaranteed some rights but not freedom of speech. Parliament in 1275 outlawed "any slanderous News … or false news or tales where by discord or slander may grow between the King and the people …"

The advent of the printing press in Europe presented new challenges to the political and religious authorities, and four basic approaches to censorship were used:

- Licensing of a printing company itself;
- Pre-press approval of each book or edition of a publication;
- Taxation and stamps on regular publications; and
- Prosecution for sedition against the government or libel of individuals.

Often both state and Church censored publications. The Church issued the first Index of Prohibited Books in 1559, and through its control of universities such as the Sorbonne, also controlled all other kinds of publications. The dual system of censorship was widely used in Catholic nations around the world, for example, to prevent the invasion of Protestant ideas in Latin America in subsequent centuries (Newth 2001).

Protestant nations were also engaged in political censorship. In sixteenth-century England, printing was controlled by licensing through the Stationers Company, and punishment for printing unlicensed material was meted out by the Star Chamber. The punishments included the death penalty for printing treasonous articles, for questioning the Church of England, or advocating (or even envisioning) the death of the king. The strictest censorship laws were overturned in 1641, as Parliament demanded reform, and outright censorship ended in 1692, following the Glorious Revolution and ascent of William and Mary to the British throne four years previously.

One of the first countries to put an end to censorship was Sweden, which passed a law in 1766 banning the practice. The law emerged from a controversy over a 1759 pamphlet by Peter Forsskål called "Thoughts on Civil Liberty," in which he echoed John Milton, saying, "Truth always wins when it is allowed to be denied and defended equally."

While printing was often censored locally in central Europe, German states agreed through the Carlsbad Decrees of September 20, 1819, to suppress any seditious writing. The decrees were enforced by what was called the "black commission" located, ironically, in the birthplace of the printing revolution—Mainz, Germany. The Carlsbad Decrees were one of the factors in the European revolutions of 1848, to be discussed in Chapter 2.

The ideas about free speech that took hold in the new marketplace of ideas came from people like John Locke, Jean Jacques Rousseau, Benjamin Franklin, Thomas Paine, and Thomas Jefferson. They insisted that human rights were natural, and not simply handed down by governments or kings. The very structure of government ought to be balanced to allow people to act according to these natural rights, said French philosopher Baron de Montesquieu in arguing for separation of government powers into executive, legislative, and judicial branches. This idea, published in *The Spirit of the Laws*, was to form the basis of most nineteenth- and twentieth-century governments.

In Scotland, as already noted, philosopher David Hume defended freedom of the press by saying that newspapers and pamphlets can't easily incite rebellion. By reading, people can't "catch the passion by contagion," he said (Hume 1742).

Sentiment in favor of free speech and free press echoed back and forth across the English Channel and the Atlantic. In London, on February 15, 1721, popular newspaper columnists John Trenchard and Thomas Gordon, writing under the name of Cato, said:

> Without freedom of thought, there can be no such thing as wisdom; and no such thing as publick liberty, without freedom of speech: Which is the right of every man, as far as by it he does not hurt and control the right of another; and this is the only check which it ought to suffer, the only bounds which it ought to know. (Trenchard 1720–3)

Benjamin Franklin, in his persona as "Silas Dogood," made the identical comment a year later: "Without Freedom of Thought, there can be no such Thing as Wisdom; and no such Thing as publick Liberty, without Freedom of Speech." The motto, written above an entryway to the US Senate, differs only in the placement of a comma from the original by Trenchard and Gordon.

The strongest voice of the French Enlightenment was Francois Voltaire (1694–1778), author of *Candide*, who believed, more than anything else, in toleration, the rule of law, and freedom of opinion. In his *Essay on Tolerance*, Voltaire said, "Think for yourselves and let others enjoy the privilege to do so too." Voltaire also said, in a 1770 letter, "I detest what you write, but I would give my life to make it possible for you to continue to write" (Tallentyre 1907). The idea was later paraphrased as: "I disapprove of what you say, but I shall defend to the death your right to say it."

Naturally, talented printers often moved to nations where they were free to publish, such as Netherlands (Holland), Switzerland, Sweden, and later, Britain and the United States. Freedom of the press drew thinkers like Rene Descartes, John Locke and many others of the early Enlightenment to the publishing houses of the Netherlands. As astronomer Carl Sagan noted, "Because of its tolerance for unorthodox opinions, [the Netherlands was] a haven for intellectuals who were refugees from censorship and thought control elsewhere in Europe—much as the United States benefited enormously by the exodus of intellectuals in the 1930s from … Europe" (Sagan 1980).

Freedom of the press was also seen as among the natural freedoms, and it was among the "first freedoms" that also included religion, speech, and assembly to be recognized during the American Revolution with the *Virginia Declaration of Rights*, of June 12, 1776, followed by the *Declaration of the Rights of Man and of Citizen*, France, August 26, 1789. Freedom of the press and religion were included in the First Amendment of the federal US Constitution, also called the *Bill of Rights*, in 1791.

These formed the basis of a modern international understanding of human rights, guaranteed in the United Nations *Universal Declaration of Human Rights*, of December. 10, 1948, and the *European Convention for the Protection of Human Rights and Fundamental Freedoms* of May 5, 1963.

## 5.3 Political revolutions

Just as books helped spark the Protestant Reformation, newspapers triggered political revolutions in England, the United States, Europe and Latin America during the eighteenth and nineteenth centuries. While every revolution has its own unique causes and effects, revolutionary changes in media are often intertwined with rapid changes in the social structure (Billington 1999).

Revolutionaries from the seventeenth to the twentieth century have advocated using the media of their day to advance the political revolutions they created. American revolutionary pamphleteers and publishers were well known as incendiaries. Observers of the French Revolution saw a rapid change in the media before and just after the revolution. Both Lenin and Gandhi began their very different forms of revolution by starting newspapers. And the role of various types of media in dozens of other revolutions has been well documented.

"If a great historical movement such as the Reformation can legitimately said to have started as a quarrel of monks, [late nineteenth-century revolutions were] also, in a certain sense, a tumult of journalists," said historian Aime Dupuy. The same point could have been made about any political revolution.

As philosopher Jurgen Habermas argued, political change is not only marked by a clash of classes or cultures, but is often an outcome of changes in the way people exchange ideas. The period from the seventeenth to the twentieth century was marked by a shift away from authoritarian monopolies over public debate and toward the rise of public opinion. A major factor was the "explosive power" of the periodical press (Habermas 1991).

## 5.3.1 The English Civil War and the marketplace of ideas

When England's Parliament broke with the monarchy, starting the English Civil War between 1642 and 1646, England's small printing shops quickly expanded into a full-blown industry, with more than 350 periodicals and tens of thousands of other one-off broadsheets, almanacs, ballads, broadsides, and other publications (Friedman 1992).

Both sides—the Royalists and the Parliamentary forces—had their own newspapers, some of them falsely designed to entrap supporters of the other side. Historian Hiley Ward tells the story of "Parliament Joan," a woman who pretended to be selling Royalist newspapers so that the buyers could be identified by their sympathies and turned over to Parliamentary forces (Ward 1996). John Milton's 1644 *Areopagitica* (noted above) was one of the few arguments for tolerance. While it had little contemporary impact, the concept of a marketplace of ideas was taken up by others arguing for freedom of conscience and press in the next century.

While both sides vehemently criticized the other, open discussion of political issues within each faction was not possible. Parliament continued the reign of censorship with the 1643 Licensing Act, which stayed in effect throughout the English Civil War. But the censorship was ineffective against the enormous pent-up demand for news, opinion, and entertainment that had long been suppressed.

As Jerome Friedman noted:

> The two tumultuous decades of the English revolution witnessed a virtual tidal wave of cheap pamphlet publication covering every conceivable topic from religion to pornography, from reports of apparitions and monsters to odes describing the beneficial effects of opium and marijuana, from hysterical reports of Ranter blasphemy to accounts of scandalous religious charlatans claiming they were Jesus, Mary, and a host of other Biblical personalities returned from the dead. (Friedman 1992)

The end of censorship in England came in 1694, with the end for the formal licensing system, a result of the "Glorious Revolution" of 1688, when Parliament installed Dutch King William III and Queen Mary II as constitutional monarchs in England (Smith 1988). The revolution marked the end of the English Civil War and the birth of a new period of religious tolerance and press freedom.

In 1778, French Enlightenment philosopher Francois Voltaire compared the civil wars of Rome (49–45 BCE) to the English Civil War of the 1600s:

> The Romans never knew the dreadful folly of religious warfare … But here follows a more essential difference between Rome and England, which gives the advantage entirely to the later—viz., that the civil wars of Rome ended in slavery, and those of the English in liberty. The English are the only people upon earth who have been able to prescribe limits to the power of kings by resisting them.

## 5.3.2 Revolutionary press fights for American freedom

Meanwhile in the American colonies, governments initially punished even the mildest criticism with imprisonment. Many colonies still operated with absolute authority. Even though England was convulsed in Civil War at the time, Virginia governor William Berkeley, a royalist, said in 1648, "I thank God there are no free schools nor printing, and I hope we shall not have these hundred years; for learning has brought disobedience and heresy and sects into the world; and printing has divulged them, and libels against the best government. God keep us from both” (Brown and Brown 1964).

As a result, Virginia lagged behind other states. Massachusetts had higher education by 1636, with the founding of Harvard College, and Elizabeth Glover started a printing chapel in Cambridge in 1639. It took Virginia until 1693 to establish its own college—William and Mary, in honor of England’s new constitutional monarchs—and three more decades to start a newspaper. Governments continued to suppress printing in the American colonies, closing down the four-page newspaper *Publick Occurrences* after its first edition in 1690 in Boston. Coffee house owner Benjamin Harris had no license for his newspaper, and what’s more, had slyly criticized the government. Prosecutions for libeling the government (called seditious libel) continued. Truth was not a defense in such cases, and in fact, truthful criticism was seen as even worse since it more credibly undermined authority. This changed when a New York jury overruled a judge and established truth as a defense in the libel of government in 1735.

The pre-revolutionary period in America was marked by the rise of printing establishments in every major city in the colonies, and new printers were frequently assisted on liberal terms by Benjamin Franklin, who not only owned a newspaper (the *Pennsylvania Gazette*) but also invested in a paper mill, a type foundry, and an ink factory. It was Franklin’s assessment of Britain’s unwillingness to change that tipped the scales among colonial printers; and the colonial press, in turn, paved the way for the revolution. “The [American] Revolution was effected before the war commenced,” said the second US President, John Adams, writing to editor Hezekiah Niles in 1818. “The revolution was in the minds and hearts of the people, a change in their religious sentiments of their duties and obligations … This radical change in the principles, opinions, sentiments, and affections of the people, was the real American Revolution.”

The most powerful weapons in this struggle were the colonial newspapers, according to historian Mitchell Stephens. During the decade before the outbreak of revolution, newspapers “festooned themselves with polemical woodcuts: divided snakes, death’s heads as mocking substitutes for tax stamps, and coffins designed by Paul Revere to represent the victims of the Boston Massacre” of 1774. Their rhetoric was heated, such as in this line from the *Massachusetts Spy* of 1773: “Shall the island Britain enslave this great continent of America, which is more than ninety nine times bigger, and is capable of supporting hundreds of millions of millions of people? Be astonished, all mankind, at her superlative folly” (Stephens 2007).

## John Peter Zenger and the Law of Seditious Libel

A landmark moment in American and British press freedom was the John Peter Zenger trial of 1735. Zenger’s newspaper, the *New York Weekly Journal*, objected to electoral manipulation by an unpopular colonial governor, who responded by charging Zenger with seditious libel, which means defaming the government. At the trial, Andrew Hamilton, a Philadelphia lawyer, gave an eloquent argument to the jury, insisting that truth should be a defense against seditious libel and that the cause of freedom everywhere was at stake.

> The question before the court and you, gentlemen of the jury, is not of small or private concern. It is not the cause of one poor printer, nor of New York alone, which you are now trying. No! It may in its consequence affect every free man that lives under a British government on the main of America. It is the best cause. It is the cause of liberty. And I make no doubt but your upright conduct this day will not only entitle you to the love and esteem of your fellow citizens, but every man who prefers freedom to a life of slavery will bless and honor you as men who have baffled the attempt of tyranny …

The jury agreed with Hamilton and bravely returned a “not guilty” verdict. The judges, overruled by the jury, were powerless to continue the case since the jury had, in effect, changed the law. The case had a far-reaching legal and psychological impact in colonies, to the extent that it was later seen as “the germ of American freedom, the morning star of that liberty which subsequently revolutionized America” (Linder 2001).

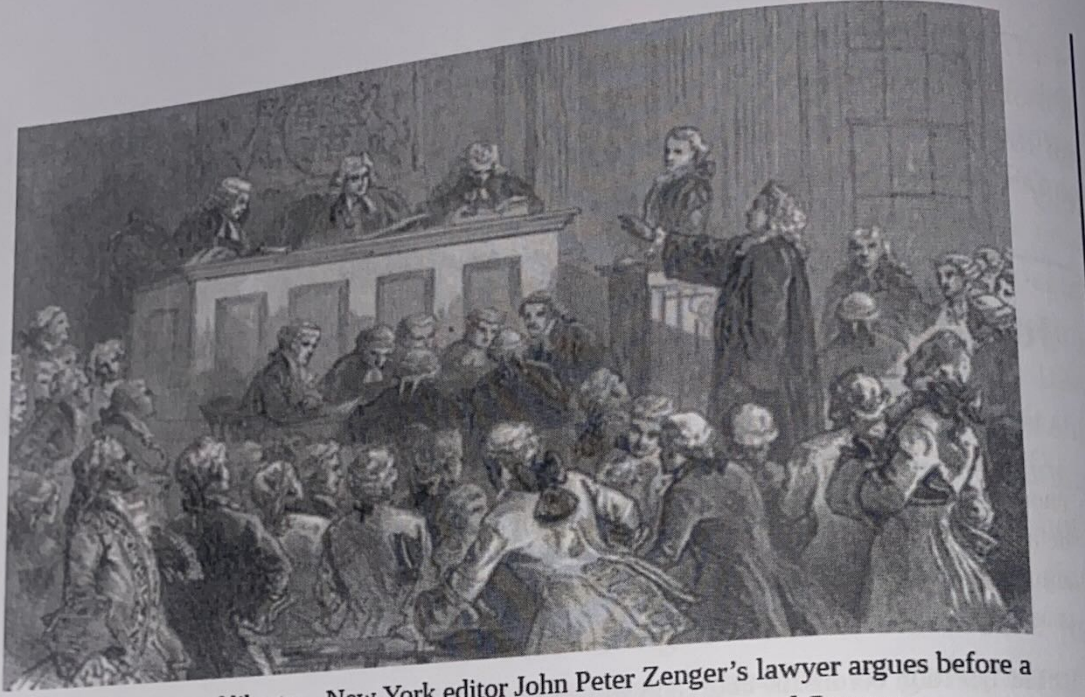

**Figure 1.15** The cause of liberty—New York editor John Peter Zenger's lawyer argues before a colonial court in New York in 1735. Painting by Martha J. Lamb, Library of Congress.

Among the most famous agitators for American independence was Thomas Paine (1736–1809), an Englishman who emigrated to Boston in 1774. Paine's pamphlet *Common Sense* argued for a complete break with Britain and independence for the American colonies. In *The Crisis, 1776–1777*, Paine famously said:

> These are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their country; but he that stands by it now, deserves the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph. What we obtain too cheap, we esteem too lightly: it is dearness only that gives every thing its value. Heaven knows how to put a proper price upon its goods; and it would be strange indeed if so celestial an article as FREEDOM should not be highly rated.

The success of the American Revolution, and the role played by the press, meant that press freedom would be protected in a way that would inspire many other countries.

The First Amendment, Thomas Jefferson said, was “a great experiment … to demonstrate the falsehood of the pretext that freedom of the press is incompatible with orderly government.”

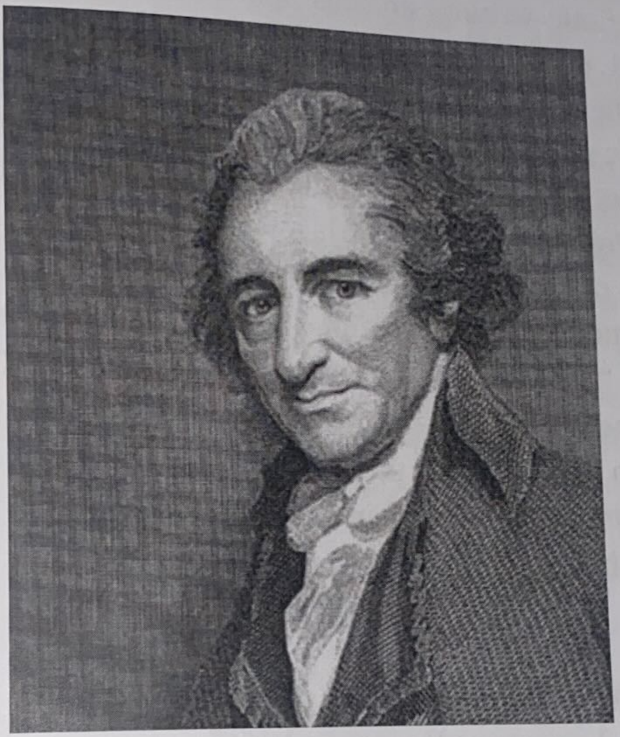

**Figure 1.16** Thomas Paine—“These are the times that try men’s souls”— The words that turned the spark of rebellion into a campaign for American freedom emerged from the pen of Thomas Paine in 1776 and were spread by the printing press throughout the colonies. After independence, Paine became involved in the French Revolution, then returned to the United States at the invitation of the then-president Thomas Jefferson. From a painting by George Romney, Library of Congress.

### 5.3.3 France: The call for freedom and the descent into terror

In the decades before the French Revolution, official censors worked hard to contain the circulation of forbidden books, anti-monarchist booklets and the innumerable pamphlets (called “libeles”) that floated around Paris and the provinces.

Baron de Montesquieu had to work in secret on his *Spirit of the Laws*; Denis Diderot was hounded as he worked on his *Encyclopdie*; and Franois Voltaire and Jean-Jacques Rousseau had to flee the country at various times in their careers.

The idea that these writers were being oppressed by small-minded censors seemed like "a flock of eagles submitted to the governance of turkeys" (Darnton and Roche 1989).

Not all official sympathies were against them. Diderot was once publicly accused of unpatriotic writing, and his apartments were searched by the same official who had previously arranged to hide Diderot's notes in his own apartment. Like the American Revolution, the French Revolution was preceded by a shift in public sentiments expressed in the media. "What took place in 1789 could not have occurred as it did without a press or media revolution," said historian Jeremy Popkin (Popkin 1995).

A new network of "assemblies and clubs, newspapers, pamphlets, broadsides, songs, and other media … closely and intensely tied to events" was in itself a central part of the "democratic culture" of the Revolution (Reichardt, 1988). In other words, the new form of the press was a symbol of the Revolution; the change in medium was part of the revolutionary message. One of the most interesting moments of the revolution was when journalist Camille Desmoulins (1760–94) was pushed to the front of an angry mob milling on a Paris street on July 12, 1789:

> I was carried upon a table rather than allowed to mount it. Hardly had I got up on my feet when I saw myself surrounded by an immense crowd. Here is my short speech, which I shall never forget: "Citizens! There is not a moment to lose … This evening all the Swiss and German battalions will sally forth from the Champsde-Mars to cut our throats. We have only one recourse—to rush to arms." I had tears in my eyes, and spoke with a feeling that I have ne'er been able to recapture, no less describe. (Snyder and Morris 1962)

Two days later, Desmoulins helped organize the group that stormed the Bastille; an event commemorated every year as French Independence Day. Later that month his *La France Libre* was published, stating, "A popular and democratic government is the only constitution which suits France, and all those who are worthy of the name of men." His columns were widely circulated during the early years of the French Revolution, but his denunciation of the revolution's excesses led to his execution in 1794. During the first decade after the French Revolution, about 350 newspapers were published in France (Schramm 1988).

Newspapers helped consolidate the gains of the revolution but also split into partisanship over the course of the revolution, with leading papers favoring the Girondists (liberal republicans) or the Jacobins (radical revolutionaries). Newspapers were supported through the Declaration of the Rights of Man and of the Citizen of August 1789, which says in Article 11, “The free communication of ideas and opinions is one of the most precious of the rights of man. Every citizen may, accordingly, speak, write, and print with freedom, but shall be responsible for such abuses of this freedom as shall be defined by law.”

The press was needed in the early stages of the revolution, according to historian Robert Darnton, to circulate the Declaration of the Rights of Man, ideas for the new constitution, new currency, a new calendar, a new map, and changes in the language itself. “At every stage in this process they use the same basic tool: the printing press,” Darnton wrote. “Without the press, they can conquer the Bastille, but they cannot overthrow the old Regime. To seize power they must seize the word and spread it … When the revolutionaries grasped the bar of the press and forced the platen down on type locked in its form, they sent new energy streaming through the body politic. France came to life again, and humanity was amazed” (Darnton 1989).

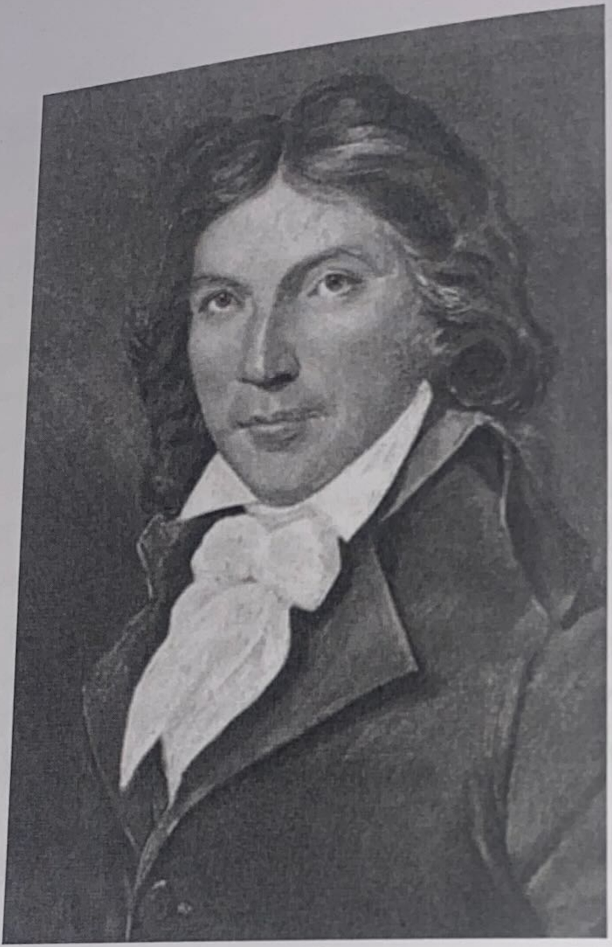

**Figure 1.17** "Citizens! Rush to arms!"—Camille Desmoulins, an impoverished French journalist and lawyer, is remembered for an impassioned speech that sparked the storming of the Bastille. One of the revolution's most insightful minds, Desmoulins opposed the radical Jacobin faction and was executed in 1794. From a painting by Rouillard, Library of Congress.

Humanity was terrified, too. The violent rhetoric of the French Revolution reached a new extreme with Jean Paul Marat, a Swiss physician who spent most of the pre-revolutionary years in London. He arrived in France to help lead the Jacobins and wrote horrifying predictions about what would happen if the revolution failed. In a July 1790 pamphlet entitled "C'enest fait de nous" ("We're done for!"), Marat wrote:

> A false humanity has restrained your arms and stopped your blows. If you don't strike now, millions of your brothers will die, your enemies will triumph and your blood will flood the streets. They'll slit your throats without mercy and disembowel your wives. And their bloody hands will rip out your children's entrails to erase your love of liberty forever.

As history has so often shown, fanatical rhetoric in the media can lead to bloody deeds in reality. An estimated 40,000 people, including King Louis XVI and Queen Marie Antoinette, were executed by the radical Jacobins at the urging of Marat and others. The Terror worsened when a Girondist (liberal) assassinated Marat at his home in 1793 while he wrote in the bathtub, but then ebbed with the establishment of the Directory in 1795. By 1798, Napoleon Bonaparte assumed power and many of the revolution's noble sentiments, including freedom of the press, lay in ruins. A widespread system of censorship was put in place by 1808, and the number of newspapers in Paris dwindled to thirteen and then finally to four by 1811. Censorship was lifted following Napoleon's defeat, then imposed and lifted again in cycles over the next century.

### 5.3.4 Spain, Portugal, and Latin American

The Spanish and Portuguese worlds of Europe and the Americas were yoked to authoritarian political systems from the earliest days of the press, and censorship was strict and relentless. However, like their counterparts in the American and French revolutions, Enlightenment-era Latin Americans also began a long process of political revolution that depended on the press.

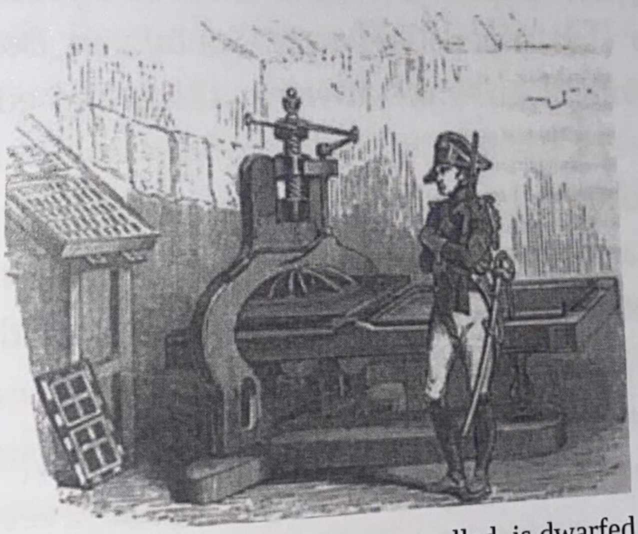

**Figure 1.18** Napoleon—The little corporal, as Napoleon was called, is dwarfed by the printing press. Although he was a novelist and the publisher of several military newspapers early in his career, he also imposed draconian censorship during his reign as emperor of France. Public domain.

Some of the early voices for liberation included Francisco de Miranda (1750–1816), a Venezuelan revolutionary who brought a press and six printers along on an 1806 expedition to liberate Venezuela from Spanish forces. In his Independence proclamation, Miranda said: "The day has come in which our [Latin] America recovers its sovereign independence, where our children will be able to freely express the whole universe of [their] generous sentiments." But the expedition was a failure, and the press fell into Spanish hands and became La Gazeta de Caracas in 1808.

To the west, in Columbia, editor and revolutionary Antonio Nariño (1765–1824) kept escaping captivity and returning to fight for freedom. Five years after the French Revolution, Nariño and a group of others had been jailed during the famous "Trials of 1794" for reprinting the French Declaration of the Rights of Man and other seditious ideas. One Cuban journalist endorsed the government view, saying that Spanish America did not have to accept "the pretentious freedom some people think the French enjoy." To fight royalist sentiments, Nariño established a political newspaper in Columbia, *La Bagatella*, in 1811. With a band of revolutionaries, he fought the Spanish government until he was captured in 1814. He lived to become part of the independent revolutionary government established a decade later.

Simon Bolivar (1783–1830), the liberator of Latin America, was about midway through a twelve-year military campaign when he ordered the creation of two revolutionary newspapers to diffuse ideals of freedom and independence: *Correo del Orinoco* (1818) and *Gazeta de Santafe de Bogota* (1819). Bolivar spent much of his time, even while at war, writing and editing these and other newspapers.

Latin American scholars have seen the press as "an extension of the army" for the other revolutionary movements, such as those in Argentina, Chile, Peru, Mexico, and elsewhere in Latin America, beginning around 1810.

Many insisted on freedom of the press in their new constitutions. Under the heading "Liberated de la Prensa," the *Correo del Orinoco* defended the proposed Constitution of Venezuela, saying it would guarantee "everyone's perpetual right to communicate their sentiments through any possible media … although with just limits, and making people responsible for their printings, words and writings."

Brazil's press history took a different turn, since presses were prohibited in the early centuries of colonization. In 1808, as Napoleonic forces invaded

Portugal, the royal family fled to Brazil and brought a printing press with them. The exodus of Portuguese royalty aligned the old state and military with the constitutionalist movement, and a degree of press freedom was achieved, lost, and then won back again through a variety of Brazilian governments during the nineteenth century.

“Most liberators and heroes had something to do with the press,” said Leonardo Ferreira, author of *Centuries of Silence: The Story of Latin American Journalism*. “They regarded the printed page as the best means of diffusion of their revolutionary ideas. Few revolutionaries, however, were willing to accept a right to freedom of the press without certain limitations … In the end, all that enthusiasm … during the early days of the revolutionary war would become, with few exceptions in later times, an exquisite but momentary taste of freedom, an immortal but unfinished revolution” (Ferreira 2006).

## 6. The Partisan Press before the Industrial Revolution

News traveled slowly before the Industrial Revolution. A newspaper printed in New York might reach Boston in three days, Richmond, Virginia in five, and Cincinnati, Ohio in ten. It would take almost two months to cross the Atlantic from New York to London or Paris until steamships became common in the 1830s, reducing the journey to about two weeks. Newspapers traveling from London to Caracas would take three months.

In Europe, the number of daily and weekly newspapers grew from about 2,400 in 1820 to about 12,000 by 1900, even though publishers there were handicapped by censorship, higher taxes, and higher postal rates. In the United States, newspapers were supported by favorable postal rates as part of a strategy for democratic self-government (Starr 2004). In contrast to Europe, where postal rates held down newspaper circulation, the number of US daily and weekly publications grew from about 800 to nearly 16,000. With fifty newspaper and magazine subscriptions per 100 homes, twice as many publications were available by 1823 to Americans as the British, and the number grew to three times as many by 1900.

The US Postal Service was considered a public service, not a for-profit agency, operating with the idea of unifying a widely disbursed population. Printed information, rather than personal letters, made up 95 percent of the weight carried in the mail, but only 15 percent of the revenue (Starr 2004). Americans were enormously proud of their newspapers. In 1817, Niles Register claimed that New York state, with 96 newspapers, had "probably … a greater number than is published in the whole of Europe" (*Niles Register*, April 26, 1817).

Although the figures are inaccurate, the assumption that Americans depended on newspapers more than other nations was essentially true. "In America there is scarcely a hamlet that has not its newspaper," wrote French aristocrat Alexis de Tocqueville in his 1835 book *Democracy in America* (de Tocqueville 1835). Because "there are no licenses to be granted to printers, no securities demanded from editors, as in France, and no stamp duty, as in France and England … nothing is easier than to set up a newspaper … Hence the number of periodical and semi-periodical publications in the United States is almost incredibly large."

Most newspapers in the United States or Europe were sold to a small circle of subscribers for at least five or six cents per copy, and the optimum economy of scale kept printing operations relatively small. Even national publications in the United States, like Baltimore's *Niles Weekly Register*, had circulations under 5,000. Editors kept in touch with each other by sending their publications through the mails. If the newspaper was being sent to another editor in a small town, it would be considered an "exchange," and other editors were free to print excerpts with attribution. This was seen as so important in the United States that the Post Office did not charge to deliver an exchange.

But the system of low postal rates, editor exchanges and widespread competition would change rapidly, beginning in the mid-nineteenth century, as steam printing transformed local publishing and the telegraph changed the way national news was distributed.

## 6.1 Partisan papers in Great Britain

The Glorious Revolution of 1688 set the stage for reform in England, and in 1694 the Licensing Act expired. Parliament approved a resolution, drafted by John Locke, noting that prior restraint was impractical: it hindered scholars and hurt the printing trade. Dozens of newspapers emerged at this time supported by two major political factions who opposed each other in the press and every other every aspect of public life. These two parties were the Tories and the Whigs.

The Tory party supported the monarchy over Parliament and tended to resist social reform and support tradition. By the mid-1800s the Tories became the Conservative party. (The name Tory derives from an insulting Irish term for robbers.) The Whig party supported Parliament over the monarchy, and supported free trade, religious toleration, abolition of slavery, and expansion of voting rights. Whigs became known as Liberals and an offshoot became the Labour party in the late 1800s. (The name Whig derives from a nickname for Scottish parliamentarians, Whiggamores, which meant cattle drivers.) Early Tory newspapers included the *Post Boy* and the *Examiner*; Whig newspapers included *The Times*, the *Flying Post*, and the *Observator*.

These newspapers existed in a world swirling with political controversy that also included Whig and Tory political organizations, Whig and Tory coffee houses, and even Whig and Tory fashions in clothing and entertainment. "Party conflict covered almost every aspect of public, professional and even recreational life in post-revolutionary England" (Bucholz 2009).

In 1701, a group of printers wrote to Parliament in protest against a contemplated tax on newspapers. At the time, England had "five master printers" using about 20,000 reams of paper per year, or about 28,000 newspapers in circulation per day nationwide. These sold for one halfpenny "to the poorer sort of people, who are purchasing it by reason of its cheapness, to divert themselves and also to allure … young children and entice them into reading." Hundreds of families, especially blind people, supported themselves by selling halfpenny papers on the streets of London (*Encyclopedia Britannica* 1911). The halfpenny press might have continued in England, but a stamp tax was imposed in 1724, and cheap newspapers vanished into an underground "pauper press" until 1855, when the tax was repealed. It was an extension of this same tax act to the American colonies in 1765 that aroused furor among American printers.

British authorities were finding the press very difficult to control, both at home and in the colonies, in the late 1700s. “For more than a century, newspapers and pamphlets had been strewn across the tables of clubs, inns, taverns and coffee houses and had fueled animated exchanges,” wrote historian Jeffrey Smith. No one exemplified this problem better than the editor of the *North Briton*, John Wilkes. Wilkes had been a Member of Parliament for six years when he criticized a speech by King George III. He was convicted of seditious libel in 1764 and fled into four years of exile in France. He returned in 1768 to a tumultuous reception. The crowds in the London streets made it clear that Wilkes was widely supported by public opinion (Smith 1988).

He asserted parliamentary privilege, was released, and won re-election to Parliament in 1768. His treatment by the British authorities was watched carefully in the American colonies, and was considered one reason why American colonial printers believed that the social contract was being undermined by corrupt British leaders. Ironically, just as the revolution was breaking out in America, Wilkes became Lord Mayor of London and spent the rest of his life defending relatively conservative political views.

By the late 1700s, the news business was dominated by the *Times of London*, established by John Walter in 1785. In the beginning, *The Times* favored modest reforms and supported the “unalienable rights” of citizens, including freedom of speech and the right to petition the government (*Parliamentary Reform* 1785). Walter was not immune to the problems experienced by Wilkes, Cobbett, and others, spending 16 months in Fleet Street jail on libel charges. Despite competition from the *Manchester Guardian* and other regional newspapers, *The Times* remained the semi-official newspaper of the nation until 1981, when it was purchased by Rupert Murdoch’s News Corporation. (After this, the *Guardian* became the UK’s leading newspaper.)

### 6.1.1 What was the Fourth Estate?

The term “Fourth Estate” was a reference to the growing power of the press by Whig party leader Edmund Burke in a 1787 speech to Parliament. The speech was made when the visitor’s gallery was opened to the press for the first time. According to historian Thomas Carlyle, Burke said that there were three “estates” (walks of life) represented in Parliament: the nobility (House of Lords);

the clergy; and the middle class (House of Commons). "But in the Reporters Gallery yonder, there sat a Fourth Estate, more important by far than they all."

This story is disputed. Editors of the *Oxford English Dictionary* say that they cannot confirm Carlyle's statement attributing the phrase "Forth Estate" to Burke. The earliest solid reference is in 1821 to William Cobbett, who was called "a kind of fourth estate in the politics of the country." Another reference is to a different speaker in the House of Commons in 1823 or 1824, and the idea was treated as original at the time.

The point of the historical debate is simply whether the political power of the press was widely recognized in the late 1700s or some fifty years later. Still, by the end of the nineteenth century, there was no doubt about the power of the press. As Oscar Wilde said around the time of his trial for homosexuality in 1895, "In old days men had the rack. Now they have the press … Somebody called journalism the Fourth Estate. That was true at the time no doubt. But at the present moment it is the only estate. It has eaten up the other three … We are dominated by journalism."

### 6.1.2. Trans-Atlantic connections

Journalists and their ideas traveled back and forth across the English Channel and the Atlantic Ocean as London became Europe's hothouse of political debate. Benjamin Harris, a London publisher, moved to the United States, opened a coffee house, and printed the nation's first newspaper before moving back to London. Benjamin Franklin came to London after leaving his brother's newspaper in Boston, working to learn the trade and earn money to open the *Pennsylvania Gazette* in Philadelphia in 1731.

During the revolutionary period, journalists Thomas Paine and William Cobbett traveled between England, the United States and France. And during the later tabloid press period (late 1800s, early 1900s), publishers in England often adopted agendas and ideas from American counterparts. US publisher William Randolph Hearst and British publisher Alfred Harmsworth, for example, were friends who often traded ideas and techniques.

William Cobbett (1763–1835) was one influential journalist who was constantly in trouble with authorities. He originally wrote from a pro-British perspective in the United States in the 1790s, then returned to England in 1800 and established a Tory publication called the *Weekly Political Register* in 1802. His conservative views changed over the years as he observed the cruelty, poverty, and corruption of the age. In 1809, when he objected to the use of German troops to put down a mutiny, he was sentenced to two years in prison for seditious libel.

Cobbett was in prison when he wrote about the Luddite riots of April 1812. All across the industrial north of England, mobs of starving, unemployed textile workers were seizing grain carts and breaking into factories to destroy steam-powered looms. When *The Times* suggested forceful suppression as the only course, Cobbett reacted: "With what a perfect coolness, with what sang-froid, with what a disregard for the lives of the people this must have been written" (Snyder 1962). After his release from prison, Cobbett continued to edit the *Political Register*, supporting agrarian reform, Catholic emancipation, and changes to the dreaded Poor Laws. But in 1817 he fled back to the US when Britain passed the Blasphemous and Seditious Libels Act. The act gave magistrates the power to seek and seize libelous materials. But the act was not especially effective, and juries were reluctant to convict editors, as Cobbett found when he returned to England. From 1819 to 1835, he fought off at least four more serious libel charges. Cobbett showed that the role of the British press in the social reform movements of the late 1700s and early 1800s could be daring, despite the frequent imposition of jail terms. In the end, his case for reform was largely accepted by British public opinion and reform governments in the mid-1800s.

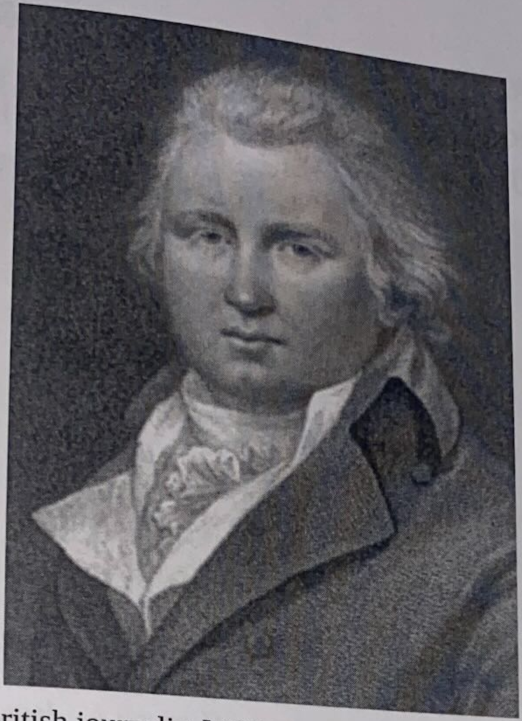

**Figure 1.19** Peter Porcupine—British journalist William Cobbett poured heated rhetoric into his US publications in the 1790s, warning in vitriolic terms of the excesses of the French Revolution and sympathizers like Thomas Paine. He celebrated his sharp personality with the pen name "Peter Porcupine." Returning to Britain in 1800, Cobbett attacked its "smothering system" that led to the Luddite Riots of 1811–12. He vowed to expose Britain's "service and corrupt press" that had become an instrument in the "delusion, the debasement and the enslavement of a people." Engraving by F. Bartolozzi, 1801, Wikimedia Commons.

## 6.2 Partisan papers in the United States

During the early years of the American republic, newspapers were usually financed and published by partisans of two major factions—John Adams' Federalist party and Thomas Jefferson's Democratic-Republican party. Phillip Freneau's *National Gazette* sided with Thomas Jefferson and the Democratic-Republicans. The paper favored the French Revolution and opposed the Alien and Sedition Acts. Jefferson later said that Freneau saved the country, "which was galloping fast into monarchy." After Freneau retired, Benjamin Franklin's nephew started a newspaper in Philadelphia called *The Aurora* that took up the defense of Democratic-Republican causes.

John Fenno's *Gazette of the United States* was the Federalist publication that sided with George Washington, John Adams, and Alexander Hamilton on great questions of the day, such as the need for a strong federal government. The Federalists were alarmed by the French Revolution.

In an attempt to head off an American version of the French Terror, Congress passed the Alien and Sedition Acts of 1798. Aimed at deporting French sympathizers and quelling criticism of President John Adams, the Sedition Act led to the imprisonment of about 100 people for speaking out against Adams and the government. Thomas Jefferson denounced the Sedition Act as a violation of the First Amendment of the US Constitution, which guaranteed freedom of speech and press. In the Virginia and Kentucky Resolutions, Jefferson and James Monroe argued that the states and not the federal government were ultimately sovereign, and therefore the federal government could not take away the rights of citizens. Although the Alien and Sedition Acts expired in 1801, the two resolutions had unintended consequences as the basis on which the Confederate states justified secession from the Union in the American Civil War (1861–5).

Not all newspapers descended into political partisanship. *Niles Weekly Register*, published in Baltimore from 1811 to around 1844, was guided by what editor Hezekiah Niles called a principle of "magnanimous disputation" (Luxon 1947). Niles was a forerunner of the more objective account of events, and his newspaper covered not only politics but economics, science, technology, art, literature, and population growth.

Niles is sometimes remembered today as the "Editor who tried to stop the Civil War" since he anticipated the conflict as early as 1820 and attempted to outline economic policies like diversification and public works that might lead toward compromise and reconciliation. Remarkably similar policies would resurface in the aftermath of the American Civil War from newspaper editors like Henry Grady and Ralph McGill of the *Atlanta Journal* (Kovarik 1992).

# Life in a printing chapel

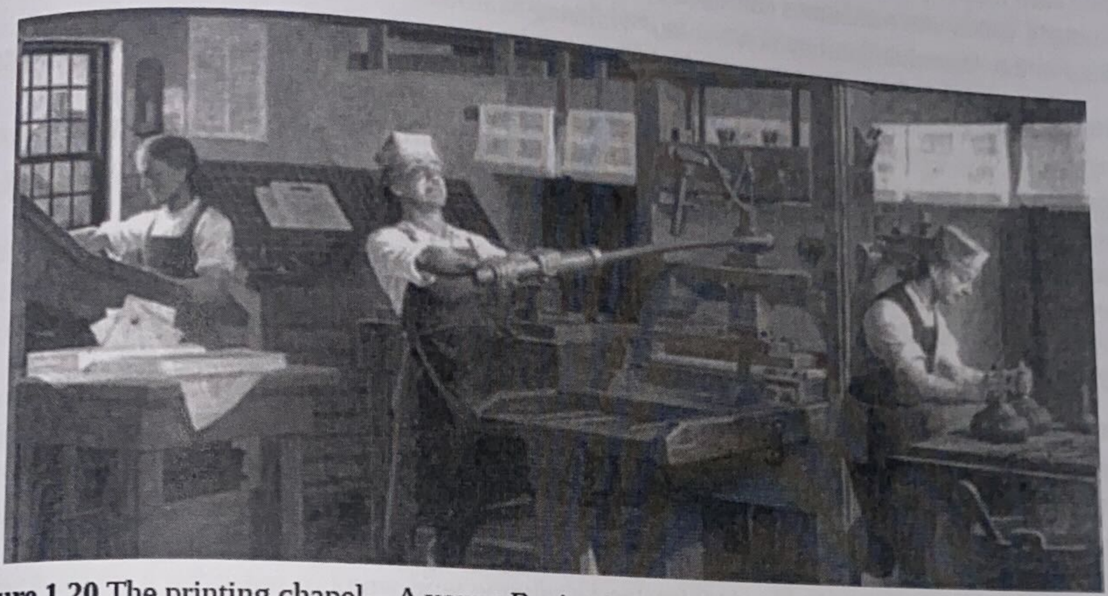

**Figure 1.20** The printing chapel—A young Benjamin Franklin is depicted working in Samuel Palmer's printing chapel, on London's Bartholomew Close, during his apprenticeship in 1725. Engraving by Charles E. Mills, Library of Congress.

Imagine, for a moment, what it was like to work in a printing "chapel," and to live in a world that had barely changed between 1454, when Gutenberg developed moveable type printing, and the mid-1800s, when industrialization changed printing.

If you were an apprentice in a printing chapel, you might find the work tedious, but you would probably find the working environment fascinating. Here, literacy and intelligence were rewarded, women often worked alongside men, and the most interesting people in the city or the nation would show up at all hours.

As an apprentice, you would work under a system of rules much like other trades. You would start out at an early age, perhaps ten, and work your way up to journeyman around age eighteen.

Your work day was long—often twelve to fourteen hours. You worked in a printing company but you called it a "chapel," partly because printing evolved from the scriptoria where monks once labored. And, like the hierarchy of a church, your shop foreman was called a "sextant." In your first week or so, as an initiation ritual, you would receive a "washing," which was a howling maelstrom of noise created by the other apprentices and printers in the chapel. Every person in the chapel joined in, and the drumming, banging, cheering, and roaring could be deafening (Savage 1841).

Apprentices would be assigned unpleasant chores like greasing the presses, preparing the ink for pressmen, and (probably the least favorite) turning over the animal hides that would be soaking outside in vats of urine.

Once you were a journeyman, you might be expected to travel from city to city for two to three years, never coming close to home (except in case of an emergency), and keeping a "traveling book," complete with stamps and notes from various chapels where you stopped off and learned from each master printer. Journeyman years in Germany were called "*auf der Walz sein*" ("to be rolling"), which was sometimes confused by English-speakers as "waltzing," as in the Austrian dance or the Australian journeyman's song, "Waltzing Matilda."

Printing had its own culture, like any craft, but because it was a system that standardized language, many of its own terms and inside jokes have taken on broader meanings over time. In English, words and phrases such as upper case and lower case, out of sorts, by the same token, on the stick, wrong end of the stick, minding your ps and qs, stereotypes, and clichés—all of these come from printing culture. Even different types of meaning of the word "type" are reflections of the pervasiveness of printing culture.

## *Setting type*

Imagine you're in the printing chapel ready to set a few words in type. You would step up to a workbench with two cases, each with dozens of open compartments that hold the individual metal letters. The capital letters are in the upper case and the small letters are in the lower case. Both of these terms—upper case and lower case—are still in use today. The cases have larger openings for commonly used letters, such as e, t, and a, and smaller openings for less commonly used letters.

In order to set the type, you pluck out the pieces of type and place then into a long holder called a "stick." The holder is set at the specific width of a column of type. Holding the wrong end of the stick would mean you'd be setting the type incorrectly.

Let's say you wanted to set the type for the phrase *Life in a print shop*. You would start with the letter "L" in the upper case, placing it into the right hand side of the holder, with the nick up and the letter facing backwards. Then set the i, f, and e—all facing backwards—and then a quadrat (space), then I, n, quadrat, a, quadrat, and so on. This can be confusing at first, and an apprentice typesetter might be told: "mind your ps and qs," because a "p" would look like a "q" when it went in backwards. Ps and qs can also refer to pints and quarts in a tavern, so the double entendre may have kept the idea alive.

The first job of an apprentice typesetter would often involve breaking up the columns of type after they had been set and used to print a book or newspaper. You'd clean them off and sort type back into the type cases according to letter, font, and size. Apprentices would have to be sure that each piece of type went back into the right slot and that the cases were ready for the typesetters. If this took too long, the typesetters might be "out of sorts"—in other words, they would lack the sorted type of a particular font. Later, this came to mean that a person might be upset. Usually, typesetters would work from copy written in longhand on a paper held to the top of the composing case by a spike. When an experienced editor was in a hurry, he or she might set type without even writing out the copy beforehand. This was called composing "on the stick." Today being "on the stick" means being busy with a pressing task (and not being impaled).

By the time you were a journeyman printer, you could probably set around 1,500 letters per hour, or about twenty words per minute. A column of type might take half the day—five or six hours—to set. Once type was set, the columns would be assembled in galleys on the composing stone and then held together inside a frame. The frame would be locked down with quoins and other "furniture."

Then the type would be placed on a press.

To print a sheet of paper, one pressman (the "beater") would gently pound an even coat of ink into the type using two soft leather inking balls (this soft leather came from the hides soaking in vats of urine). Another pressman would place a damp page of blank paper into the frisket (a cover to protect the edges of the page from stray ink) and gently fold it over the frame of inked type. The final stage was to roll the type down the carriageway underneath the platen. The pressman would pull on the long lever, and the paper would be pushed down into the inked type. Then the pressman would release the lever, roll the type back, open up the frisket, and hang the page up to dry.

A team of two pressmen and an apprentice would usually print a "token" of 258 sheets per hour. The expression "by the same token" means turning the sheets over once the ink has dried in order to print on the other side of the paper.

Once the pages were printed, they had to be assembled carefully to make a book. This involved placing and trimming the pages in the right order and then sewing up the back of each set of pages, or "signature," which could be from four pages, or sixteen or twenty-four, depending on the size of the page and the kind of book being produced.

It was hard for a publisher to know how popular a book might be. If a book might go into a second or third printing, it would be expensive to reset the type again. But it was also expensive to leave big blocks of pages set in type.

One process to make this cheaper was called a stereotype, and it was developed in England in the 1740s, although not widely used until a century later. A copy of the bed of type would be made with a paper mache mold, and then filled with solid type metal (lead, tin, and antimony) to form a stereotype. This was also called a cliché in France, in part because the lead foundries in the Paris suburb of Clichy served the French printing industry, and also in part because it is an onomatopoeia: molten lead being poured into a mold makes a sound like "cliché."

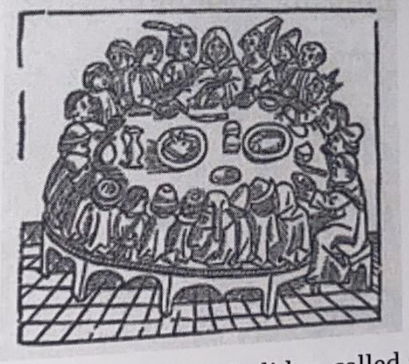

**Figure 1.21** A traditional engraving of the printer's holiday, called a Wayzgoose. Public domain.

## Playing quadrats and getting a washing

The work could be tedious and exacting. To make the day go by more quickly, and to contribute to the education of apprentices, one printer might be asked to read aloud from works of literature or the Bible.

Printers had strict social rules. They were not allowed to brag, or to whistle in the presence of a lady, or to leave candles burning when they were not present. Breaking any of those rules would result in a punishment, which they called a "solace," and this could involve performing a nasty chore, or putting money into the entertainment fund, or singing an embarrassing song at the annual printer's holiday, the Wayzgoose, that took place every August 24th.

Printers had fun too. A typical pastime was a game called "quadrats," which uses the square blank type spacers. Each quadrat has a nick, or indentation, on one of its four sides. The game was described in a 1683 book on printing customs:

> They take five or seven Quadrats … and holding their Hand below the Surface of the Correcting Stone, shake them in their Hand, and toss them upon the Stone, and then count how many Nicks upwards each man throws in three times, or any other number of times agreed on: And he that throws most Wins the Bett of all the rest, and stand out free, till the rest have try'd who throws fewest Nicks upward in so many throws; for all the rest are free: and he pays the Bett. (Moxon 1683; Savage 1841)

But watch out! If the sextant (foreman) of the chapel caught you playing quadrats, you would pay the solace (punishment). Sometimes the sextant or master printer also had to pay the solace, since playing quadrats can batter and spoil the type.

If you or a co-worker were in the habit of telling tall tales, sometimes other workers would express their disbelief by giving a washing and making loud banging noises on their presses or type cases. And if, for some reason, an apprentice or journeyman resisted a solace or a washing, and if the other workers in the chapel were determined to enforce it, then the Spirit of the Chapel (sometimes called "Ralph") was said to be "walking" in the shop. Then, whatever mischief was done to the apprentice, such as getting his type "pied" (mixed up) could be blamed on the Spirit.

For additional reading, discussion questions, links to video, and other suggestions, see www.revolutionsincommunications.com.